

SOUTHERN AUTOMOTIVE JOURNAL

SERVING THE 19 SOUTHERN AND SOUTHWESTERN STATES SINCE 1921

December 1960

Servicing Chrysler's New Starter Motor

PAGE 32

30% More Work, Same Personnel

PAGE 29

Eliminating Sloppy Steering Linkage PAGE 40

Incentive Lifted Sales PAGE 31

Personal Follow-Ups Bring Repeat Jobs PAGE 37

Talk P.M. to Tap More Electrical Orders PAGE 38



PERFECT CIRCLE
PISTON RINGS ARE
BUILT TO TAKE IT



THE MEASURE OF LEADERSHIP

One important measure of leadership for a company is its engineering advances. And, since the birth of the automotive industry, Perfect Circle has made more important contributions to piston ring design than any other ring manufacturer.

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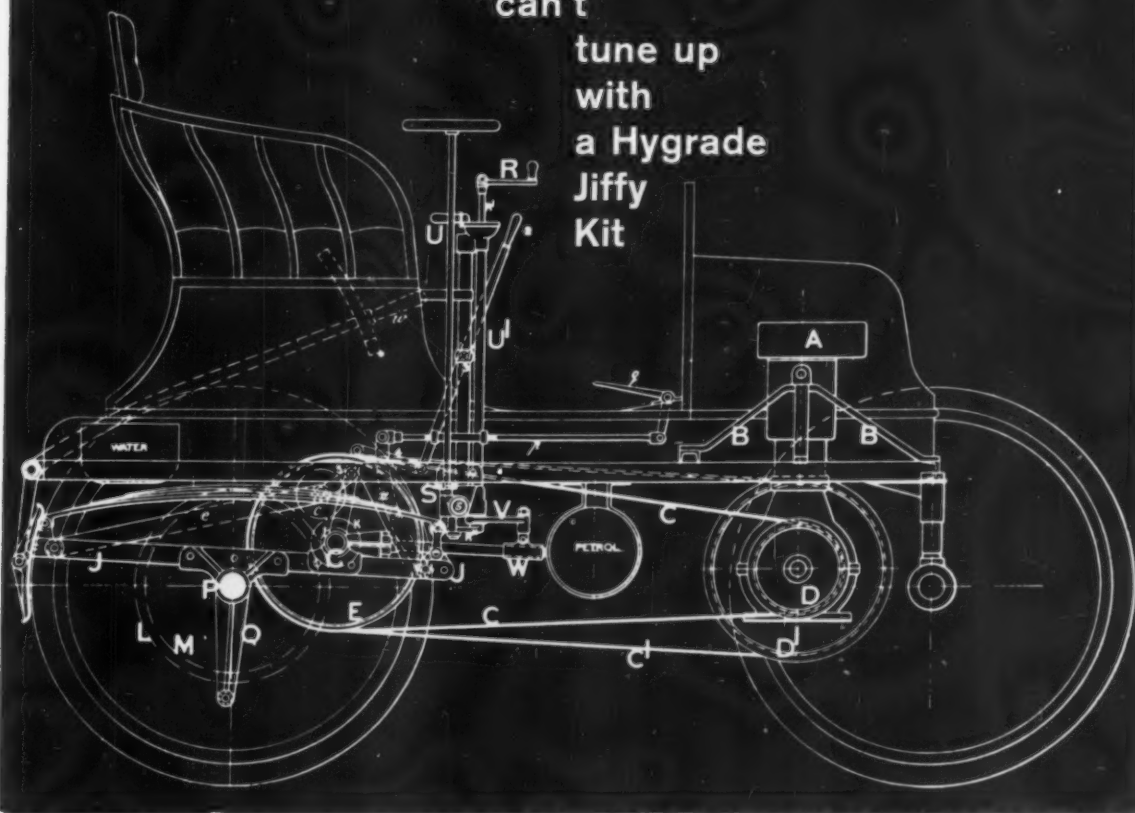


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*Sorry, no Jiffy Kit available for this 1899 English Daimler Critchley Light Car.



You can tune up over 90% of all cars on the road with one economical assortment of Hygrade Jiffy Kits. Jiffy Kits contain needle valves and seats, gaskets, economizer valves, pump pistons, instructions and tools—to fit all carburetors: Carter, Stromberg, Ford, Holley, Rochester...and small engines, too! See your jobber or write HYGRADE PRODUCTS DIVISION, Standard Motor Products, Inc., Long Island City 1, New York.

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and a prosperous year to come



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CORP. • ASSOCIATES DISCOUNT (CANADA)
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SOUTHERN AUTOMOTIVE JOURNAL

Covering Automotive Sales and Service

Volume 40 NO. 12

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Serving the 19 Southern and
Southwestern States Since 1921

Contents for Dec. 1960

SELLING CARS AND SERVICE

30% More Work, Same Personnel 29

(and the shop gang have more time—service advisors and mechanics alike—since this Nash-ville dealership made some simple changes in handling the flow of traffic. These changes can easily be incorporated by big and small shop managements.)

Incentive Lifted Sales 31

(and the dollars-and-cents experience reported by a Chevy Chase, Md., service station operator shows how volume can be built in TBA when employes are alerted because their pocketbooks are involved.)

Personal Follow-Ups Bring Repeat Jobs 37

(and don't think this is merely the follow-up plan which has been in use for years in many dealerships. It's a supplement, because it's been proven to be a builder of repeat service vol-ume.)

Talk P.M. to Tap More Electrical Orders 38

(and when this service station did, the average electrical sale has been up to \$25 a day—and the monthly volume in spark plugs and other ignition-related items has been hitting around \$3,000.)



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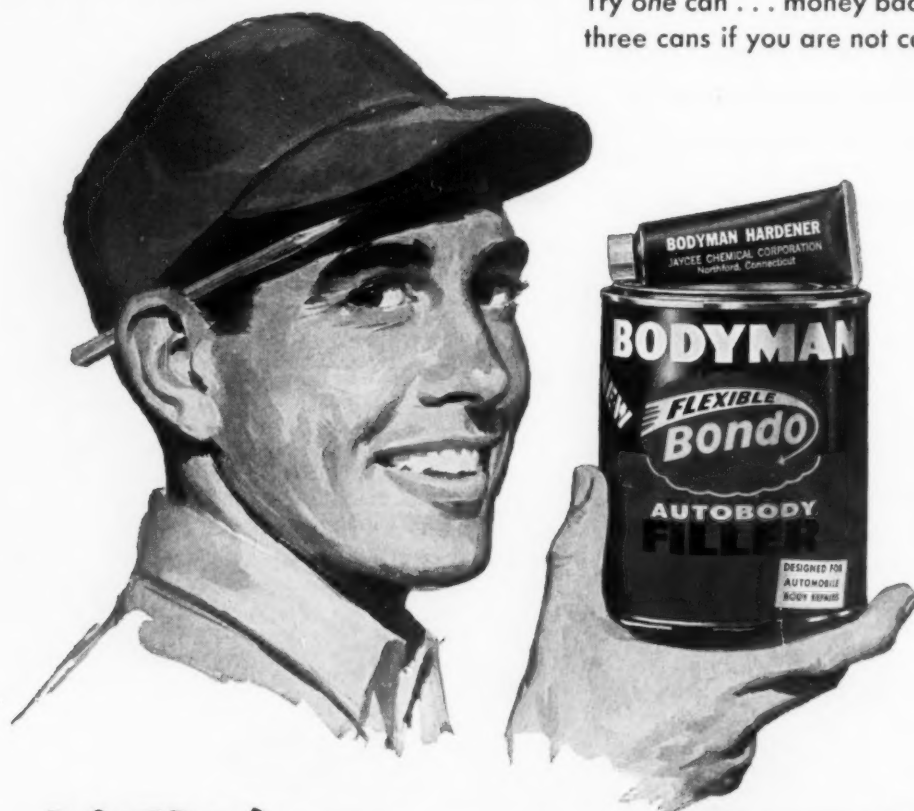
4

FOR THE
PRICE OF

3

MONEY-BACK GUARANTEE

Try one can . . . money back on the remaining three cans if you are not completely satisfied!



NEW Bondo BODYMAN

Because it was formulated especially for the autobody man, it is fast becoming the trade's most wanted filler.

Here's a *real* deal! Four quart size cans of new Bondo BODYMAN for the price of three. A terrific opportunity to stock up . . . or to introduce your shop to the smoothest finishing, easiest handling autobody plastic filler ever offered! Cream catalyst requires no kneading . . . and both catalyst and compound are in different colors to provide a quick check on thorough mixing.

Special offer ends December 31st, 1960. Check with your automotive jobber *today!*

- **EASIER-TO-MIX** . . . cream catalyst is homogenized!
- **ODORLESS, SAFE** . . . non-irritating and non-toxic!
- **FLEXIBLE** . . . resilient, non-rubbery. Offers superior feather edging!
- **DUST MINIMIZED** . . . heavier-than-air particles fall to the floor!

BONDO DIVISION, JAYCEE CHEMICAL CORP., NORTHFORD, CONNECTICUT



Automotive **SPOTLIGHT**

December 1960

What are you going to be ringing in with the bells at this month's end? We'll help answer that when we report next month what people just like you have to say about '61. More than 800 car dealers and shop owners were asked to crystal-gaze and the early replies indicate some good things ahead, especially for those equipped—physically and thinking-wise—to grab the automotive ball.

Thumbing through Southern automotive industry: Robert Neff Lineweaver, Sr., 75, who had a gruff voice and a warm heart, died last month after a heart attack. He was reportedly the oldest Chevrolet dealer in years of service, having just introduced his 49th new model at Staunton, Va. A one-time buggy, carriage and wagon dealer, he also owned Lineweaver Olds-Cadillac Co. in that lovely Shenandoah Valley city . . . David E. Castles, president of Castles-Wilson Buick Co., St. Louis, celebrated last month his 51st year with Buick. He's a past president of the National Automobile Dealers Association and a founding father of his state association. . . . And speaking of elderly statesmen among the dealers, two long-admired Mississippians got their just desserts last month: L. Flowers Hamrick, Ford dealer at Greenwood, was presented the 1959 "Quality Dealer of the Year Award" and S.E. Kossman, Sr., who handles Buick and Rambler at Cleveland, received the similar award for 1960. . . . Stephen L. Noble has moved up to director of dealer relations of Plymouth Division of Chrysler Corp. from being director of the Southern area of Chrysler's corporate sales staff.

Why do motorists buy the cars they buy? The answers, boiled down from a survey of some 1,500 new-car purchasers by the American Petroleum Institute:
1—Style and appearance, 2—best price, 3—cheapest to operate and 4—good, dependable motor.

The South continues to disrobe Detroit a mite. The latest bit of shedding—latest tribute to the happier labor and natural resources abounding throughout the Southland—was the dedication at Marianna, Ark., of the Douglas-Lomason Co. plant, where some 160 employes will build seat frames and springs for GM products, representing an over-all outlay of \$1,000,000.

Why give insurance companies a discount on parts? It's been going on for a long time, but there are growing forces to stop this carving away of shop owners' profits. Biggest wheels shouldering the movement are the garagemen in several states, including Ohio and North Carolina. Delegates to the quarterly board meeting of the Independent Garage Owners of North Carolina last month went on record as being "opposed to the practice now in effect throughout the state of granting a discount on parts to insurance companies" and recommended that each of two dozen local units appoint a special committee "to start working to get results on this recommendation." This group also assailed the sale of spark plugs, anti-freeze and other automotive items through drug stores, grocery stores and other non-automotive outlets.

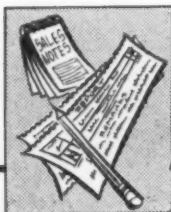
Happy birthday to us! You're invited to our "party" next month, marking 40 years that ink has been pressed over paper with SAJ's name on it. This celebration will be in the nature of letting some of the old-timers of the South dream back over the days to the early '20's when men were men and if they weren't, a broken arm was the result from a stubborn crank. These writers will take you back where you yourself can't go, unless you're at least 50 years old.



New cars have a way of stealing the show . . . they're on everybody's mind, in everybody's conversation. And once again, "There's Nothing Like a New Car" is the theme of a wide, wonderful advertising campaign which is steering a stream of prospects to General Motors dealers. These big, colorful advertisements are designed to whet the appetite for '61 GM cars, and to help guide a bigger share of our nation's disposable income into *your* showroom. The ads sing a song of fun, excitement and adventure . . . remembering to stress the practical values of performance, safety, reliability and big selection that only GM can provide. *It's great to be a GM dealer! . . .*

GENERAL MOTORS





Automotive MARKETS

GM's Chief Sees Car Use Jumping 40%

"IN THE next ten years, we look for a growth of about 40% in the number of passenger cars in use, bringing the total to 75,000,000 cars at the end of the decade."

That prediction by Frederic G. Donner, General Motors board chairman, included a forecast of 90,000,000 vehicles on the road, including trucks.

General Motors will make a one-and-a-quarter-billion-dollar investment next year on the basis of its faith in continued free world prosperity, Donner said. Approximately \$1.2 billion will be spent in the United States and abroad this year to introduce new models and for such purposes as plant, machinery, equipment and tooling, he said.



GM Chairman Donner

He said that GM's forward planning is "based on the expectation" that new-car demand may reach a level of 7,000,000 units in the United States by 1961. Sales of domestic and foreign-built passenger cars "should reach" this level, he said, "if consumer incomes continue to rise and consumer confidence is sustained."

He said he was "convinced that we are now approaching a new sales level of 7,000,000 cars annually" from new-car demand levels in the United States of around 6,000,000 a year since World War II and well under 4,000,000 before the war.

In the free world as a whole, Donner estimated that by 1970 demand for passenger cars will total in the neighborhood of 16,000,000 units and demand for trucks nearly 4,000,000. Of this total of 20,000,000 cars and trucks, about ten and a half million will be sold outside the United States, he said.

Kansas Rebuilder Named By MoPar Division

PRECISION Automotive Rebuilders, Inc., of Hutchinson, Kan., is one of five remanufacturers throughout the country selected to do the production and assembly work on a line of manufactured automobile and truck parts to be distributed by the MoPar Division of Chrysler Corp., it was announced last month.

T. E. Waterfall, director of sales for the division, said: "This new program is a major move to increase the service volume of Chrysler Corp. dealers and at the same time provide important advantages for car and truck owners everywhere in this country."

To be shown as "MoPar Remanu-

factured Parts," the line of products was scheduled to become available early this month for distribution through division parts wholesalers and all Chrysler dealers. The program will also include a complete line of remanufactured parts to fit all other make vehicles, Waterfall said. These products will be marketed under the name "Nubuilt" and will be distributed through the same sources.

Initially, the line will include remanufactured engines, transmissions, V-8 cylinder heads, carburetors, voltage regulators, clutch discs and pressure plates, generators, starters, armatures, fuel pumps, oil pumps, torque converters, crankshaft kits and connecting rods, it was announced.

NADA President Pictures Drop in '61 Cars

A DECREASE in production of 1961-model cars by 200,000 was predicted by Birkett L. Williams of Cleveland, Ohio, president of the National Automobile Dealers Association, at the 26th annual convention of the Arkansas Automobile Dealers Association in Little Rock.

"The production of 1961 models will be some place close to 5,800,000 against 6,000,000 of 1960 models," he said. "General business will be about the same, but there's a tremendous carryover of 1960 cars, almost twice what it was before."

Williams, a Hot Springs native, said that 300,000 1960 models were still in dealers' hands, and every time a dealer sells one he eliminates a customer for 1961.

Although the immediate production and sales outlook is not too bright, Williams said, "I think the automobile industry over the next ten years has an optimistic future. It will surpass anything we've ever done previously."

Charles Wiygul of Osceola was elected president. Other officers include Verl Hudspeth of Harrison, first vice president, and Searcy Wilcox of Hamburg, Arkansas NADA director. George H. Benjamin is the veteran executive vice president.

Raymond Loewy to Aid Studebaker Styling

RAYMOND Loewy Associates, internationally famous industrial designers, have been retained by Studebaker-Packard Corp. as consultants in advance styling, A. J. Porta, executive vice president and automotive general manager, announced.

First retained by Studebaker in 1938, Loewy renews his affiliation with specific application to styling of automobile interiors. The Loewy firm will work in conjunction with Studebaker-Packard's advance styling department under the supervision of Randall D. Faurot, director of styling.

**HOW SERVICE GARAGES,
GASOLINE SERVICE STATIONS
REFRIGERATION REPAIRMEN**

**CAN MAKE BIG MONEY
on a 4¢ INVESTMENT**



Vornado is increasing its nation-wide service franchises.

There's big money in servicing Vornado Auto Air Conditioners, as an authorized Vornado Warranty and Service Station. All you need to invest is the price of a postage stamp. A letter to the Vornado Auto Air Conditioner Corporation will start you on the road to BIGGER PROFITS AND A BETTER INCOME.

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MANUFACTURER OF BODY REPLACEMENT PANELS

JOBBERS: Write or phone for available territories.



We're Rolling Back To SAJ's Birth

"It hasn't been long; it just seems long."

That's what you say when friends ask you (in your wife's presence) how long you've been married. (Clam up then and watch your wife have to talk and talk to get herself out of that hole you automatically place her in!)

And it hasn't been long—it seems—since SAJ first pressed into print in January 1921.

The automotive world speeds at too fast a clip for many readers to have time to see where they've been. However, for the first time in 40 years SAJ's editors will roll back the curtain.

What's best of all, the rolling will be by readers for readers. Some of the best known dealers, garagemen and parts wholesalers will do the rolling.

SERVICE-WISE

The service end of this ever-more-complicated business has changed—just in case you're a modern-day Rip Van Winkle.

You know how it has changed, but SAJ's long-time technical editor, Ed Lowery, nevertheless will reminisce with you back to the days of those strange vehicles and the strange ways of servicing them.

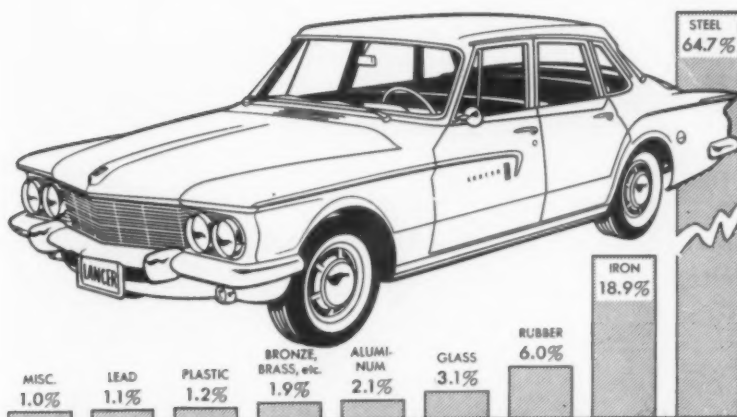
TECHNICAL-WISE

The January issue will also drop you right into current technical matters, such as how oil pumps function and how to see that they maintain adequate oil pressure.

For body shop men, a nod will go to the compacts, featuring a detailed article on the Lancer and Valiant bodies.



Automotive NEWS BRIEFS



The steel industry would have you know that it apparently will be a long time before you see an all-aluminum car running down the road. Steel is still the major material in the modern car, accounting for two-thirds of the weight. These percentages of other materials are for the Dodge Lancer.

JANUARY				APRIL				AUGUST				DECEMBER								
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
Looking Ahead																				
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11
12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1

Looking Ahead

DEALERS

- Jan. 15-19—Annual convention of National Independent Automobile Dealers Association, Eden Roc Hotel, Miami Beach.
- Jan. 28-Feb. 1—Annual convention of National Automobile Dealers Association, San Francisco.
- March 13-14—Annual convention of Louisiana Automobile Dealers Association, Roosevelt Hotel, New Orleans.
- March 26-28—Annual convention of Automobile Dealers Association of Alabama, Buena Vista Hotel, Biloxi, Miss.
- April 23-25—Annual convention of Automotive Trade Association of Virginia, John Marshall Hotel, Richmond.
- April 30-May 2—Annual convention of Tennessee Automotive Association, Andrew Johnson Hotel, Knoxville.
- May 7-9—Annual convention of Texas Automotive Dealers Association, Gunter Hotel, San Antonio.
- May 14-16—Annual convention of Georgia Automobile Dealers Association, General Oglethorpe Hotel, near Savannah.
- Feb. 3-7, 1962—Annual convention of

National Automobile Dealers Association, New York City.

GARAGEMEN

- Jan. 12-14—Mid-year board meeting of Independent Garage Owners of America, Alvin-Plaza Hotel, Tulsa, Okla.
- June 28-July 1—Annual convention of Independent Garage Owners of America, Lowry Hotel, St. Paul, Minn.

WHOLESALE

- Dec. 11-12—Annual convention of Georgia Automotive Wholesalers Association, Biltmore Hotel, Atlanta.
- Feb. 12-15—Meetings of Automotive Affiliated Representatives, Biltmore Hotel, Los Angeles.
- Feb. 13-14—Annual sessions of Automotive Booster Clubs International, Statler-Hilton Hotel, Los Angeles.
- Feb. 14-15—Annual convention of Automotive Service Industry Association, Biltmore Theater, Los Angeles.
- Feb. 16-19—13th annual Pacific Automotive Show, Memorial Sports Arena, Los Angeles.
- March 15-16—Spring convention of Virginias - Carolinas Automotive Wholesalers Association (for members only) at ?
- April 30-May 2—Annual convention of Automotive Wholesalers Association of Tennessee, Hotel Claridge, Memphis.
- May 14-17—Annual convention of Automotive Engine Rebuilders Association, Fontainebleau Hotel, Miami Beach.
- June 25-27—Annual convention of Au-

tomotive Wholesalers Association of Alabama, 400 Motel, Pensacola Beach, Fla.

- Aug. 13-15—Annual convention of Kentucky Automotive Wholesalers Association, Lexington.
- Oct. 11-14—Annual convention and booth conference of Automotive Wholesalers of Texas, San Antonio.
- Nov. 15-17—Annual convention of Florida Automotive Wholesalers Association, Americana Hotel, Miami Beach.
- Feb. 28-March 3, 1962—International Automotive Service Industries Show, Chicago.
- Feb. 13-16, 1963—International Automotive Service Industries Show, Philadelphia.

GENERAL

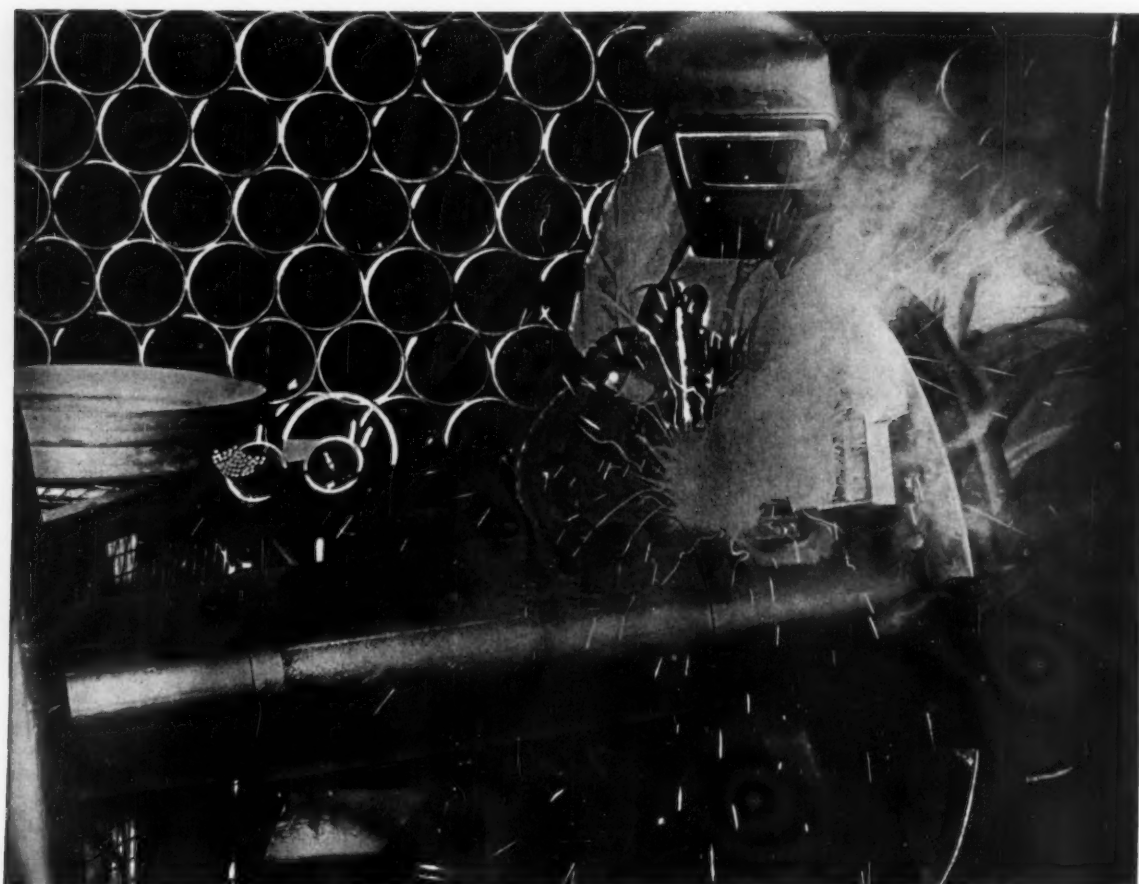
- July 31-Aug. 2—National Auto Accessory and Parts Exhibit, Las Vegas.
- Oct. 30-Nov. 2—Annual convention of Automotive Warehouse Distributors Association, Muehlebach Hotel, Kansas City, Mo.
- Nov. 8-10—Annual convention and trade show of Automotive Parts Rebuilders Association, Biltmore Hotel, Los Angeles.

Larsen Is New President Of Truck Body Group

LAURENCE H. Larsen of Superior Coach Corp., Lima O., was named president of the Truck Body and Equipment Association at its 13th annual convention and exhibit at Chicago.

Vice presidents are John W. Turnage of Ateco Equipment Co., Pittsburgh (first); Harold H. Hippler of Gar Wood Industries, Inc., Wayne, Mich. (second), and Robert H. Hunter of Hunter Mfg. Co., Cleveland, O. (third). Fearson S. Meeks of S. J. Meeks' Sons, Washington, D.C., is the secretary-treasurer, and Arthur H. Nuesse of Washington, D.C., the executive manager.

The three-day meeting and exhibit attracted a record attendance exceeding 2,000, Nuesse announced. Exhibitors occupied 182 display booths in the convention hotel, plus nine outside display spaces. Membership growth in all categories during the current fiscal year exceeded 360%, according to First Vice President Turnage, who is chairman of the 1960 membership promotion committee.



HOTTEST TIRE CHANGER EVER BUILT!

NEW COATS AIR-POWERED CHALLENGER—\$159.50



Ultra-modern production methods turn out new Challengers at rapid pace, make it possible to offer a precision air-powered tire changer at unprecedented low price.

Designed and built to give you the most for your dollar, the new Challenger has already become the choice of value-conscious tire dealers coast to coast. No-stoop operation, air power and Coats quality—all for \$159.50!

Hot off the Coats assembly line comes the greatest tire-changer value ever offered. You get air power where it *belongs*—up off the floor at table-top height—for the lowest price in the industry.

Try the air-powered Challenger before you buy. No other tire changer even comes close for the money—just \$159.50!



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COATS PROVED BEST, COSTS LESS — Made By The World's Largest Manufacturer of Tire-Changing Equipment



1960-61 Florida Automobile Dealers Association officers and directors photographed aboard the Hanseatic during that group's recent convention cruise of the Caribbean are (l. to r.): seated, Walter C. Mallory of Orlando, general manager; Don Schulstad of Tampa, secretary-treasurer; C. B. Tutan of Miami; George Williamson of Lake Wales; H. F. Wellman of Williston; Herbert L. Butler of Leesburg; Earle B. Lokey of Clearwater; F. Earl Wallace, Jr., of Delray Beach; Gordon Thompson of Jacksonville, first vice president; C. C. Harrison, Jr., of Marianna; J. L. Ferman of Tampa; Wilson P. Turnipseed of Ocala; William Catlin of Jacksonville; standing, William H. Terry, Sr., of Jacksonville; Waid Phillips of Palatka; J. T. Brasington of Gainesville; R. J. O'Brien of St. Petersburg; Walter A. Fordyce,

Jr., of Melbourne; Edward G. Cooke of Sarasota; John C. Deihl of Jacksonville; M. R. Young of Fort Lauderdale; Frank S. Edelen of Miami, president; Frank E. Welles, Jr., of Pensacola; W. Theo Proctor of Tallahassee; J. Saxton Lloyd of Daytona Beach; M. G. Nelson of Panama City; James A. Urban and W. J. Steed of Orlando, who are in the legal department. Those not in attendance were R. L. Dampsey of Tampa; T. Glenn Booth of Green Cove Springs; Donald E. Davidson of Jacksonville; Fred O. Drake, Jr., of Tallahassee; Cecil P. Holland of North Miami Beach; P. J. Schaefer of Coral Gables; Dean Martin of Daytona Beach; Roland Arnold of Vero Beach; Sam O. Smith of West Palm Beach; George B. Childs of Winter Haven; M. P. Tomlinson of Lakeland and C. H. Ratliff of Live Oak.

Car "Juice" Requirements Double Every Decade

ELECTRICAL power needed for cars has been nearly doubling every ten years, according to Jack E. Charipar, chief engineer and director of products for Plymouth-De Soto-Valiant Division.

New power convenience features continually place heavier loads on electrical systems and, meanwhile, charging components have been halved in weight and size. The result is that battery life is reduced, in many cases, and the "failure-to-start" problem increased.

To meet the need, Plymouth is offering as standard equipment on its 1961 models the alternator first introduced on the 1960 Valiant. The unit reportedly is capable of providing more than enough current to keep all electrically-operated equipment running without any strain on the battery. Unlike the old-fashioned generator, the alternator is capable of producing current even when the car is at idle.

Expected brush and bearing life for the alternator is two or three times that of the old-type generator. Shaft support roller bearings are lubricated for life and are said to require no periodic attention.

The alternator is compact and

light in weight—approximately ten pounds lighter than the generator it replaced.

Garage, Aftermarket Groups Meet at Nashville

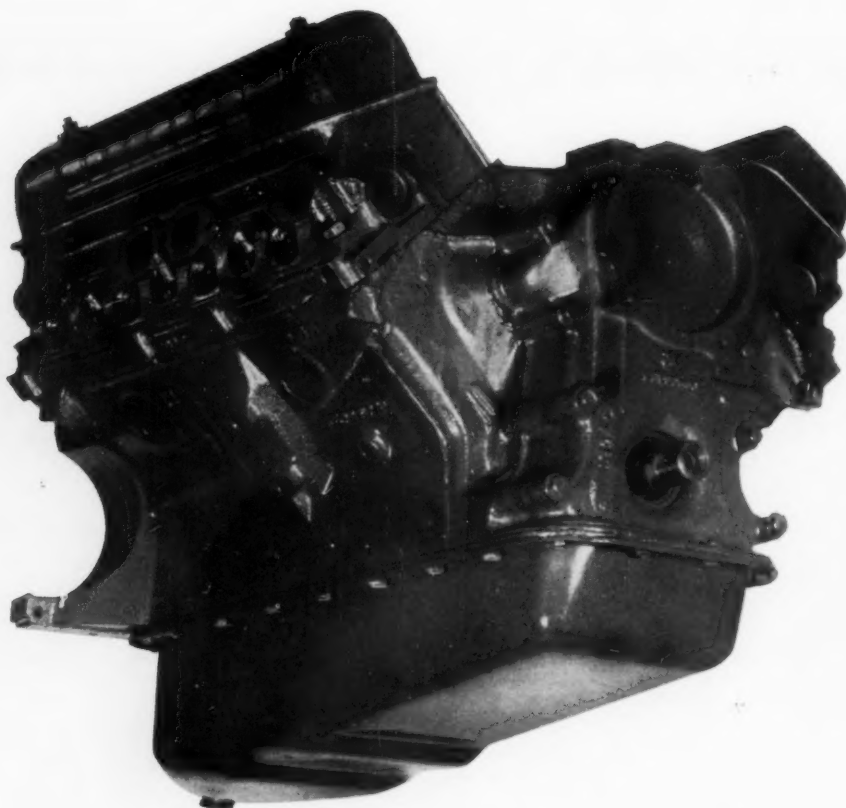
A BANQUET and meeting to promote better understanding between automotive wholesalers of Middle Tennessee, independent garage owners of Middle Tennessee and Volunteer Automotive Booster Club B-44 was held Dec. 1 at the Andrew Jackson Hotel in Nashville.

The speakers' list included Ralph H. James of Tulsa, Okla., executive director of the Independent Garage Owners of America, and Joe Del Greco of Cincinnati, president of Automotive Booster Clubs International. Coordinating committee for Booster Club B-44 appointed to arrange the meeting included J. Paul Saunders of Bowling Green, Ky., and J. McEwen Cherry of Nashville, Tenn.

A similar meeting was held several weeks ago at Memphis with the same theme.

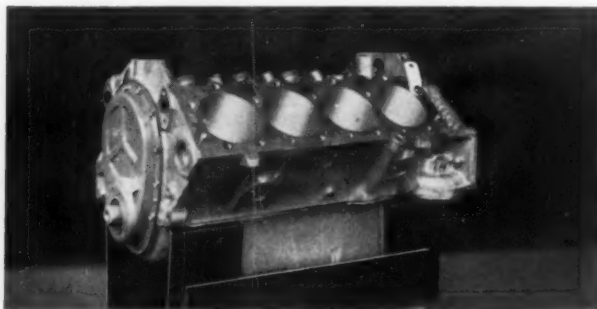
New officers of the Florida Automobile Dealers Association are (l. to r.): Don Schulstad of Tampa, secretary-treasurer; Frank S. Edelen of Miami, president, and Gordon Thompson of Jacksonville, who is the first vice president.





A complete engine is your best sell!

Especially when it's a dynamometer-tested Rogers Remanufactured. First of all you finish the job quickly, saving many hours of labor, usually finishing the job in one day and netting more money. Every part in the assembled engine has been replaced or remanufactured to rigid Rogers specifications, and the complete unit is *dynamometer-tested under full power.*



Rogers is your best source for "short" blocks! Because we carry the job further, give you a partial assembly, but charge no more. We know you still have to charge for disassembling engine, rebuilding cylinder heads and final assembly — about twice the time needed for exchanging a complete engine.

ROGERS
Remanufactured
ENGINES

Remember, your reputation rides with the engines you install!



Next month's issue of SAJ will bring you observations by veteran automotive men of the South and Southwest of what has been taking place since this publication was born in January 1921—40 years ago. Here you see one of the earliest test

tracks set up by a car manufacturer. It was opened by Dodge in 1915—six years ahead of SAJ's appearance. The steep incline tested both engine and brake performance, while the wooden track was used to test for speed.

Breaux Ballard Heads Louisville Dealers

BREAUX Ballard, Jr., of Breaux Ballard Buick Co. is the new president of the Greater Louisville (Ky.) Automobile Dealers Association.

Other officers are Carl F. O'Daniel of O'Daniel Motors, Inc., vice president, and Charles H. Dishman of Tri-City Oldsmobile, Inc., treasurer. John A. Fulton was reelected executive secretary and counsel. Directors include Charles Weyland of Monarch Auto Co., Inc., Robert Smith of C. F. Smith Motor Co., Louis J. Hermann of Summers-Hermann, Inc., Cliff Byerly of Byerly Motors, Inc., and Robert Klementz of Colonial Pontiac, Inc.

Non-Road Uses Eat Up \$450 Million in Taxes

MORE than \$450 million of state highway user tax revenue was used for non-highway purposes in 1959, according to a report by Bertram D. Tallamy, federal highway administrator.

Total revenue yield for the year in state motor fuel taxes, motor vehicle registration fees, motor carrier taxes and allied highway user imposts amounted to \$5.1 billion, Tallamy said. After deducting \$202 million for collection and adminis-

trative costs, about \$4.0 billion in tax revenues remained available for distribution. Of this amount, the

This beauty is Frieda Friedli, daughter of Kentucky Automotive Wholesalers Association Director Tom Friedli and Mrs. Friedli of Bowling Green, who was selected "Miss KAWA" at the association's second annual convention held in August in Louisville. Frieda earned the title of "Miss Southern Kentucky" last summer and she will be a candidate in the 1961 "Miss Kentucky" contest.



states spent \$3.1 billion on state highways and \$1.3 billion on local roads and streets.

Of the \$3.1 billion for state highway purposes, \$2.6 billion was for acquisition of right-of-way, construction, maintenance and administration of the state highway systems, \$202 million went for highway law enforcement and \$285 million for bond interest and retirement.

Mack Trucks Plans Move To Hagerstown, Md.

MACK Trucks, Inc., is building a 1,000,000-square-foot factory in Hagerstown, Md., to replace its present limited facilities in Plainfield, N. J., which were built in 1910.

Board Chairman C. A. Johnson said the new factory will start operations in a year and will employ "a substantial force, and we hope an increasing one over the years." The company originally estimated initial employment would total about 2,000.

Tarheel Retires After 42 Years

Don O. Bulluck, Chevrolet dealer in Rocky Mount, N. C., for 42 years, will retire the first of the year and turn the operation of Bulluck Auto Sales over to his son, Don Bulluck, Jr. The dealer plans to "take it easy."



NEED A HAND TOOL? CALL YOUR *Blackhawk* JOBBER!



Any Tool you ever need is no further away than a 'phone call to your Blackhawk Jobber! No need to wait for service! Check YOUR Tool Kit right now. Just pick up the 'phone and get that Blackhawk Tool immediately that you have been needing or intending to buy. It will make money for you. Remember! The cost of Tools you use in your work is deductible from your income tax.

Blackhawk
HAND TOOLS

**THE NEW BRITAIN MACHINE COMPANY
NEW BRITAIN • CONN.**



NEW PROFITABLE PROMOTION FOR TEXACO DEALERS!

Remember Texaco's toy tank truck offer last year? It was the most successful promotion of its kind ever conducted! Now Texaco Dealers have another giant promotion . . . a large, scale-model Toy Texaco Service Station. It's a big-value traffic builder . . . advertised in national magazines such as LOOK, LIFE, SATURDAY EVENING POST, READER'S DIGEST, AMERICAN LEGION, SUNSET. Also on the *Texaco Huntley-Brinkley Report*, TV's most popular news program . . . and on children's TV shows, plus compelling station-display material. All this means more customers, more *profits* for Texaco Dealers this Fall! Just one more reason why it pays to sell the best... **TEXACO**

SAJ-12

A modest investment may provide you with a promising future as a Texaco Dealer, Consignee or Distributor. Investigate — send this coupon to Sales Manager, Texaco Inc., 135 E. 42nd Street, New York 17, N. Y.

I would like to get complete information about the possibility of teaming up with Texaco as a
☐ Dealer ☐ Consignee ☐ Distributor

NAME _____

STREET _____

CITY _____ ZONE _____

STATE _____

Laher

(THE NAME for QUALITY)

GREETINGS

...Come, visit us in our new,

World Famous LAHER MOUNTAIN MASTER Brake Lining



LASCO MOUNTAIN MASTER
BRAKE LINING

LASCO MOUNTAIN MASTER
IRON-CLAD BRAKE BLOX

LASCO MOUNTAIN MASTER
"BIG STOP" COMBINATION
BLOX



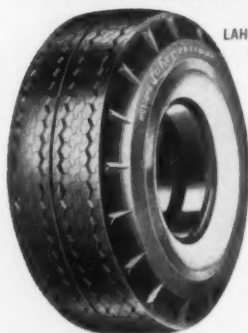
LASCO BLUE LABEL
BRAKE LINING



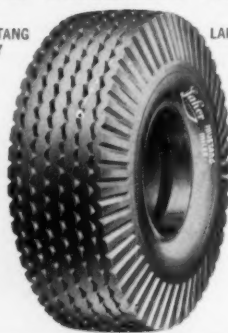
LASCO MOUNTAIN MASTER
SHOE EXCHANGE



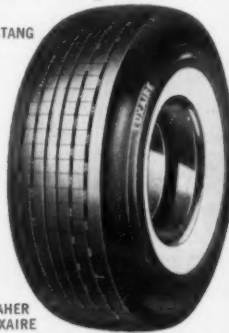
LAHER MUSTANG TIRES... "The toughest thing in rubber"



LAHER MUSTANG
FREEWAY



LAHER MUSTANG
MILER



LAHER
LUXAIRE

LAHER BATTERIES... for all cars, trucks, electric cars!



EVERY LAHER BATTERY IS A SALESMAN!

"Sell the Battery that Sells Itself... On Sight"!!

Be it in TRANSIT—

HIGH WATER LEVEL—of course!

In the WAREHOUSE—

DRY CHARGED . . . —of course!

Or on DISPLAY

4-YEAR GUARANTEE*—of course!

Many dealers have doubled—even tripled their battery business with the HOT LAHER line.

Modern, automated
sq. ft. will produce
quality products for
faster

LAHER Spring Plant—exclusive
patented, completely automated
process is the fastest leaf spring
manufacturing process in the
world.

LASCO Brake Materials Plant—
fully automated manufacturing
methods producing world
famous MOUNTAIN MASTER
Brake materials—America's
Finest Quality.

LAHER Battery Production Plant
—most modern battery produc-



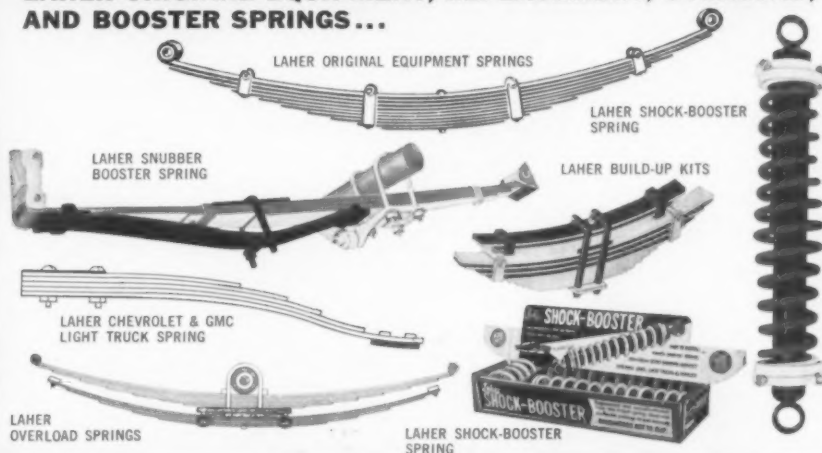
**LAHER
SPRING
& ELECTRIC CAR
CORPORATION**

DYNAMIC DIXIE!

multi-million dollar plant in New Albany, Miss.



LAHER ORIGINAL EQUIPMENT, REPLACEMENT, OVERLOAD, AND BOOSTER SPRINGS...



**plant of over 155,000
America's finest
less money — with
service!**

ing facility in the U.S. to provide the south with fresh EXETER, MUSTANG and LAHER batteries — always top quality, beautiful design — lowest prices.

LAHER Electric Car Production Plant—producing the most complete line of electric cars in the world, including material handling trucks, personnel carriers, town, club and golf cars, lift-truck equipment—over 30 models to choose from.

**... Call us, write us,
come in and say
"HELLO!"**

SOUTHERN HEADQUARTERS:
NEW ALBANY, MISSISSIPPI
TELEPHONE 4783

LAHER ELECTRIC CARS & TRUCKS FOR INDUSTRY & GOLF 30 Models to choose from...



Last year, traffic accidents killed 37,000, injured 1,400,000

...and they wasted Five Billion Dollars!

Traffic accidents' human toll is so tragic we sometimes overlook their staggering economic waste. Five Billion Dollars in lost wages, medical expenses, insurance costs and property damage! Your business—every business—shares in this loss. So you have a double interest in helping reduce traffic accidents. And you *can* help! Drive safely and obey the law yourself . . . certainly. But go further. Use your influence to promote safe driving and urge strict law enforcement. To make your efforts more effective, join with others working actively to reduce traffic hazards in your community. *Support your local Safety Council!*



Where traffic laws are strictly enforced, deaths go DOWN!

Published in an effort to save lives, in cooperation with the National Safety Council and The Advertising Council.



"TURNPIKES ARE MURDER ON ENGINE BEARINGS"

"My shop is right near the turnpike, and I tow in a lot of cars with burned out bearings. Drivers keep pushing mile after mile . . . heat builds up . . . and wham—there goes a bearing!"

Turnpike driving *does* put a big load on bearings. But there's a big difference in bearings, too. "*Turnpike Toughness*" is engineered into Michigan Bearings. Materials for Michigan Bearings are specially chosen and carefully protecto-treated for maximum fatigue strength, high thermal conductivity, corrosion and oxidation resistance, superior embedd-

ability and surface action. Michigan Bearings are machined to tolerances as close as .000125 plus or minus, assuring perfect fit at every point.

Michigan Engine Bearings for replacement are made by Detroit Aluminum and Brass Corporation—for over 35 years a principal supplier of original equipment bearings on leading automobiles, trucks, buses and farm equipment.

Use "*Turnpike Tough*" Michigan Engine Bearings for all your replacements. They're made to stay on the job!



made by

Michigan
ENGINE BEARINGS

DETROIT ALUMINUM AND BRASS CORPORATION, Detroit 11, Michigan



Still the Leader In the

RAMBLER

FOR 1961

1 RAMBLER AMERICAN

The Economy Compact

The recognized Economy King is all-new in style and beauty for '61. More compact than ever—even easier to park and garage. See the new American Beauty with room for a family of six.



2 RAMBLER CLASSIC 6 and V-8

The All-Purpose Compact

Only Rambler Classic gives you the Best of Both: big car room and comfort . . . compact car economy and handling ease. Choose from two great engines—America's only Die-Cast Aluminum Six—or high performance V-8.

3 AMBASSADOR V-8 by Rambler

The Luxury Compact

Here is the fine balance of the elegant and the agile. Luxurious room for six 6-footers combined with trim exterior size . . . stronger, safer Single-Unit construction combined with your choice of 250 or 270 H.P. V-8 engines.

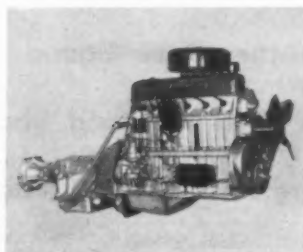


RAMBLER...The New World

Compact Car Field...



See These New Rambler Exclusives



AMERICA'S ONLY DIE-CAST ALUMINUM SIX

The new engine proved by over 2 million test miles. Reduces front-end weight by 80 pounds. Aluminum die-cast under enormous pressure to a flawless perfection that has never before been possible.



NEW WARRANTED CERAMIC-ARMORED MUFFLER

A Rambler first! Muffler and tail-pipe—coated with a special ceramic material that protects against corrosion—are warranted against defects for as long as the original owner owns a 1961 Rambler.



NEW CUSHIONED ACOUSTICAL CEILINGS OF MOLDED FIBER-GLASS

Deadens road noises by at least 30%. Increases headroom. Insulates against summer heat and winter cold. Permanently shaped for perfect fit. Standard on 1961 Rambler Classic and Ambassador models.



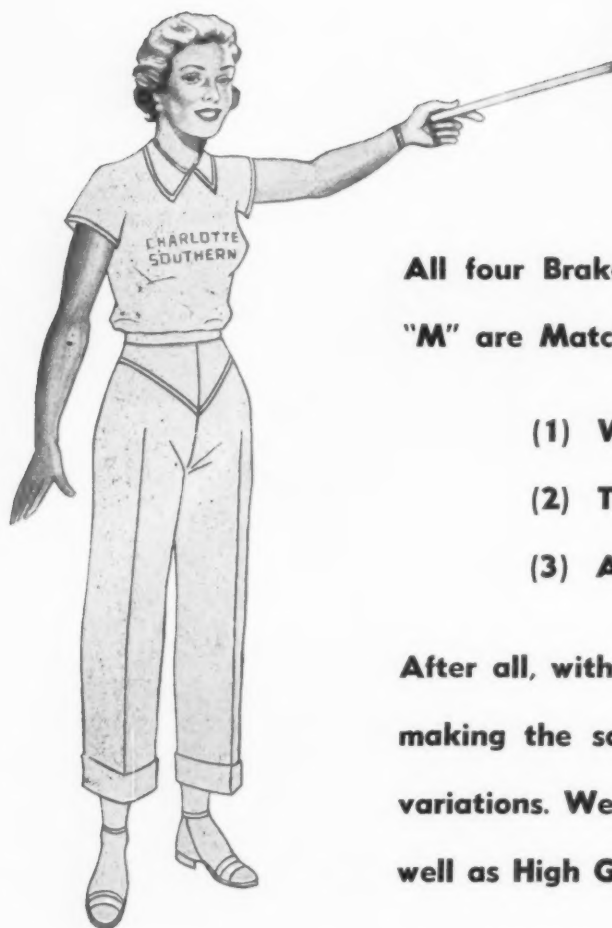
NEW RAMBLER AMERICAN CONVERTIBLE

Watch for the Rambler American convertible... smartest, quietest, most agile of them all! Only compact convertible with rattle-proof single-unit* construction.

*Pioneered by American Motors

Standard of Basic Excellence

ANOTHER FIRST FOR SOUTHERN!



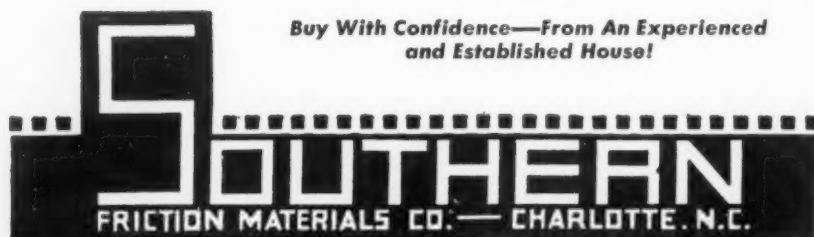
**"M" STANDS FOR
M-A-T-C-H-E-D**

**All four Brake Shoes in a box carrying our Big
"M" are Matched to afford the same:**

- (1) Web Thickness**
- (2) Throat Construction**
- (3) Anchor Cut-Out Location**

**After all, with over a dozen manufacturers now
making the same shoe, there are bound to be
variations. We feel you need Matched Shoes as
well as High Grade Lining for full satisfaction.**

**Southern Double = Lock[®] shoes have been checked
with gauges to insure Matching.**



**Buy With Confidence—From An Experienced
and Established House!**



PATENTED SHOCK ABSORBERS

ExtraOrdinary...

*how much extra money you can make
looking under cars...*

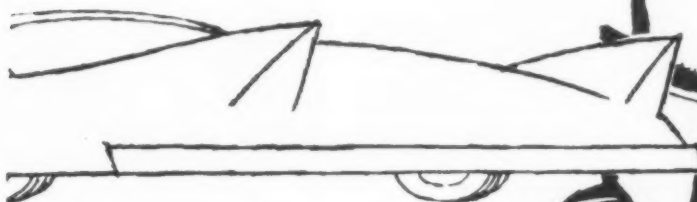
when you sell

ARMSTRONG

ExtraOrdinary **DESIGN
GIVES YOU MORE**

exclusive features to offer—puts you way ahead of competition! Boosts your profits way up... You get much more dollar value to sell—including: The exclusive Armstrong guarantee—best offered anywhere! Exclusive, a TRUE metal piston ring for longer life. Exclusive, automatic cooling for better performance, etc... You can see all the exclusive profit making facts in Armstrong's extraordinary "Under Car Profit Kit"! Call your Armstrong Jobber, or write today. Armstrong Hydraulics, Inc., 561 E. Illinois St., Chicago 11, Ill.

© 1960 Armstrong Hydraulics, Inc.



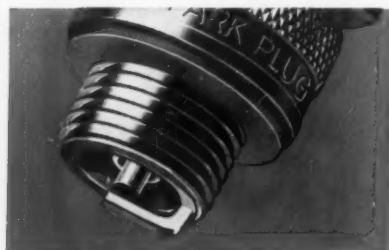
ExtraOrdinary fact: Armstrong is original equipment on more makes of cars than any other shock absorber!



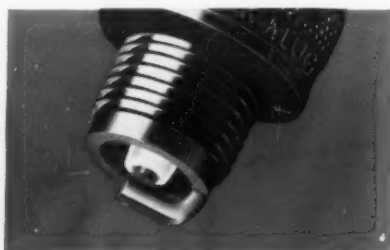
new-car ACTION new sales



Engineers specify AC for more new cars. It's the brand that's best for replacement, too. Here's why—



Only AC has the exclusive "Hot Tip"—that heats faster and cools faster to stay clean longer...



The exclusive "Extended Shell"—specially engineered for Pontiac, Buick, Ford, Lincoln and Mercury cars...



The exclusive "Solid Core" resistor—specially engineered for Plymouth, Dodge, DeSoto and Chrysler cars.

get the selling edge with

for your customers . . .

Action for you!



**AC's continuous advertising . . .
in magazines and on radio, TV and
billboards . . . helps keep AC products
moving to your customers.**

AC's round-the-clock, round-the-calendar advertising sells hard: In magazines—leading consumer, trade and special interest publications . . . on radio—covering 96% of the nation's listeners . . . on TV—reaching into millions of customer homes each week . . . and on outdoor billboards—covering all important markets. AC advertising helps build the traffic that spells more AC sales and profits for you.

AC Spark Plug  The Electronics Division of General Motors

And—here are other advantages you get when you stock and sell AC:

- Wide accessory line of the highest quality products—sold and promoted by qualified field personnel.
- Finest sales assistance based on market research, distributor councils, and continuous sales training programs.
- Better profit margins through faster turnover; plus, AC's continuous product improvement policy.
- Greater spark plug replacement potential—because ACs are original equipment on more new cars than any other brand.



fire-ring spark plugs



DEAD

■ This battery looked new. It even powered the car lights and horn up until the last minute. Then it died . . . prematurely. Battery "sul-fation" set in . . . plates hardened . . . chemical reaction stopped.

■ Chances are it wasn't a National battery. National's patented Silver-Cobalt, Sealed Charged construction provides 300% greater resistance to overcharge (number 1 battery killer) and more resistance to undercharge

(number 2 battery killer). National batteries stay stronger, longer . . . do not die before their time.

■ These are advantages for the motorist. For dealers National has a profit structure that can really make battery money. Contact your National distributor for the complete story . . . today.

GOULD - NATIONAL
BATTERIES, INC.
St. Paul 1, Minnesota

Filled at the Factory • Sealed Charged at the Factory • Factory Fresh Performance





C A DEALER CAN LIVE RIGHT WITH THE LARK... Compare the product!

Of all the compacts, only The Lark has *Performability*—you have to drive it to believe it! Only Studebaker dealers sell the economy-minded new Skybolt Six with exciting acceleration—or the hottest compact V-8 on the road. The Lark is *time-proved and improved* with new easy steering, new suspension, new big bonded brakes, new unmatched roadability. The Lark gives extra roominess—smart low-line design—comfort and luxury that even includes safety-padded dash on all models!

Only Studebaker dealers can offer the sizzling Hawk

for sports-car-minded families, and the husky, handsome Champ pickup truck—lowest priced fully rated U.S. truck.

Do yourself a favor—go drive the '61 Lark—see for yourself how *Performability* will sell in '61. You have to drive it to believe it!

And what else do you get with a Studebaker franchise? A happy and profitable association with a factory that helps—not pressures—you to profitable volume . . . a factory that keeps you in the driver's seat . . . a factory that promotes your product aggressively!

COMPARE THE OPPORTUNITY...COMPARE THE BUSINESS ATMOSPHERE...COMPARE THE FUTURE!

START LIVING RIGHT!

THE NEW '61 **LARK**[®]
BY STUDEBAKER

GET THE FACTS ON THE LARK DEALER FRANCHISE

Dealer Development Division
Studebaker-Packard Corp., South Bend 27, Ind.

Gentlemen: Please send me the facts—in strictest confidence—no obligation.

NAME _____
POSITION _____
FIRM _____
ADDRESS _____
CITY/STATE _____

SAD 11-60 1-3

Better products, *faster*, from your National Seal jobber:



You make extra profits on repacks and relines with National Oil Seals!



Always replace old oil seals with National . . . insure customer safety . . . protect yourself against costly callbacks

Build up your reputation and customer confidence—always use new National Oil Seals on repacks or relines. You turn out a top job, make extra profit, and everyone is happy! New National Oil Seals hold fresh grease in the bearing where it belongs, prevent bearings from running dry and wearing out, and keep dirt out.

Take a tip from the experts. Whenever you remove an old seal, replace with National. You'll find the most needed seals in the Safety Cabinet and your National Seal jobber will keep the stock in line for you! Call him today.

NATIONAL OIL SEALS

FEDERAL-MOGUL SERVICE

DIVISION OF FEDERAL-MOGUL-BOWER BEARINGS, INC. • DETROIT 13, MICHIGAN



This card and other simple steps helped this Nashville dealership chalk up

JOB IDENTIFICATION CHECK

The man serving you is
Fred Troupe

Your Car Identification No. is
35

Service Department Open 7:30 to 5:30 Monday thru Friday
and 7:30 to 12 Noon on Saturday

FOR QUICKER SERVICE USE NUMBER AND NAME WHEN
INQUIRING ABOUT YOUR CAR

JIM REED CHEVROLET CO.
1512 BROAD
NASHVILLE, TENNESSEE
Phone CHapel 2-4242

30% More Work, Same Personnel

WE CAN now turn out 30% more service jobs than we did before we reorganized the methods we had been following for more years than I can remember."

That's the way Service Manager W. P. Greer explained the new system set up by Jim Reed Chevrolet Co. at Nashville, Tenn. The old system had been much like the kind that dealers have been following a long time.

Before tightening up the service operations and clearing out the confusion under which this company

By **ROSS L. HOLMAN**

was working, the servicemen handled 90 to 100 jobs a day. Now they average 130—and with the same personnel in less time.

Like many other shop operations, the jobs at Jim Reed have always been handled through a control tower. They are still handled that way except that the technique has been changed to where each job is speeded through in less time.

Under the old system, when a car

came into the shop, one of the four service advisors took the order from the owner. The car was given some kind of identification number. Orders were stacked together in one pile. Each car was placed on a lot with the numerous other cars awaiting attention.

Whenever a customer inquired about his car, or when it was called for by the shop, the service advisor had a difficult time fingering the pile of orders to locate the one he was seeking. Much more time was lost in locating the correct car on

The old system of scheduling work, used by most dealers for years, is no longer employed in this busy shop.



SERVICE RESERVATION SCHEDULE FOR																			
SERVICE ADVISOR	OWNER'S NAME	R. O. #	Make	WILL BE IN	W. A. I. P. T. E.	C. O. M. P.	TIME AND DATE PROMISED	PICK UP	DELIVER	LUBE	WASH	TRAMP	ELECT.	TIRES & WHEELS	AM. COIN.	PAINT	SMOKE	WASH	TOTAL SHOP HOURS PROM.
S	John Doe	86531	Chev	11-9 8:00	G		5:00 11-9					30			10	15			55
M	Bill Jones	86540	Chev	11-9 9:00	F		3:00 11-9					10				5		5	20
D.	Jim Baxter	86544	Ply.	11-10 9:30	G		2:30 11/10					12	6			3			16
F	Mrs. Nora Reed	86546	Chev	11-10 11:00	C		3:00 11-10					14			10	5		4	13
B	Gerry Baker	86549	Chev	11-11 8:00	G		2:30 11-11					12				7		3	12
M	Britzy Allen	86557	Chev	4-11 4:00	F		3:30 11-11					10			8	8			14

Flow of shop work is controlled more easily by this service reservation schedule at Jim Reed Chevrolet.

the lot. Still more time was lost in checking the car out with the owner after it was serviced.

The confusion caused by this system, especially on any big day, kept the service personnel under nervous tension following up the multiplicity of calls involved in the different vehicles.

"But now, since we reorganized this procedure," explained Greer, "our men, with 30% more cars to handle, actually have idle time on their hands while waiting for each of the next calls as it comes in. That's because each operation is handled with less confusion."

Under the new system the service advisors take down the orders as the vehicles drive in. Each advisor is responsible for the vehicles he writes up and he is the one with whom to check until the car is turned back to the owner. He keeps his own orders and other forms involving his own customers separate

from those written up by the other receivers.

Each advisor has 30 numbers with which to identify the cars under his supervision. When a customer gives his order to him the advisor hands him a job identification check with the car identification number and name of advisor. When inquiry is later made for this particular car, the customer turns in his identification check. If the check shows car number 20, the service advisor whose list of numbers includes 20 gets busy.

Cars under the supervision of each advisor are kept in a separate group section on the lot. They are no longer thrown in all together as in previous days. The lot custodian has only to check the right car group and find the correct car with its identification number prominently displayed. Thus, much time is saved both in speeding it to the right shop division when the me-

chanics call for it, and on the way to the customer when completed.

Along with this reorganized system the company worked in another procedure that enables it to handle more jobs and to clear out more confusion. Back in the early spring it set up a reservation system. Since then many of its customers have been trained to call in ahead of time to make a reservation for the work to be done on their cars. The reservation schedule is handled somewhat like the one used in dental offices. When such a call is made, the recorded schedule ahead is consulted and the customer is assigned the first free time, which is held open for him.

By the same token, when a drop-in customer shows up for service at a time when the shop is filled with work, the advisor arranges a reservation for him in the days ahead. This reservation schedule has held many a customer for Jim Reed who might otherwise have carried his work to another shop.

Although it has been in operation only a few months, Jim Reed is now averaging from ten to 20 new reservations ahead each day. Because of the publicity it is getting, the number is gaining to where Greer confidently believes that the figure soon will be up to 30 or 40 a day.

The reservation schedule is kept on a record form that Greer and his cohorts worked out together to meet their own situation. A separate sheet or sheets are made up each day.

The form has separate columns for listing the car owner's name, name of the service advisor assigned to him, the repair order number under which he is listed, make of car, the time he is requested to be in for his service, and whether or not he will wait at the plant for his car to be completed.

Still another column lists the customer's attitude—that is, whether (Continued on page 64)

The customer will get one of the job identification checks (see preceding page) with an identification number which will enable Buddy Wright, the service advisor, to keep track of the car at all times until it's back in the owner's hands. Note how service advisors' records are displayed prominently.



Incentive ↑ Lifted ↑ Sales



"These windshield wiper blades are worn right on the edges and will scratch your windshield," this attendant points out. Wiper blade sales have tripled.

AN INCENTIVE plan explains the 35% rise in TBA sales in September '60 over September '59 and a 25% gain in customer labor at Lake Amoco Service in Chevy Chase, Md.

TBA gross ran \$5,132, customer labor \$2,118, as against \$3,976 and \$1,783 for the prior year.

"An incentive pay plan is very profitable to a station as well as to employees. It gets every employee out working for the station. It provides the push that sets in motion sales of all kinds and services of every variety. It gets every TBA item moving," said Charles Mitchell, the station dealer.

He reported gains in TBA and customer labor from 25 to 300% during the first six months of the current year over '59.

"Your service becomes more prompt, your men more alert and salesmanlike," he said. "Your customers take notice of the new spurt

in energy; they comment on it. Yet it costs your payroll a mere five per cent, in our case."

Lake Amoco Service was uneasily conscious of the rising wages in the area and the challenge to dealers to hold onto efficient labor. Providing a substantial weekly wage to six full-timers, Lake Amoco introduced a five per cent commission on all TBA over \$1 on January 1. Immediately results began showing for station and employees.

Every incoming car became a potential for sales through worn and defective parts, needed replacements and services. The five months following introduction of the incentive pay plan showed steady gains over the previous year:

TBA (and some hard parts)			
	'59	'60	
January	\$3,353	\$3,877	
February	2,604	3,515	
March	3,940	6,370	
April	4,248	5,174	
May	3,643	5,097	
Customer Labor			
January	\$1,668	\$1,873	
February	1,471	1,790	
March	1,385	1,860	
April	1,335	2,174	
May	1,456	1,944	

"Some items that never sold at all suddenly came to the fore," said Mitchell. "The men began to vie with one another to reach a car first as it rolled into the station. Their eyes scanned the car for wear as they moved from windshield to tires and under the hood. Let me give you a few examples of what actually happened."

Water pumps had had practically no sales prior to the incentive plan. If ten water pumps were sold over a six-month period, it was big business, according to Mitchell. With the introduction of incentives, salesmen began looking for the leaking and worn pump. They checked it by shaking the fan blade, explaining to the customer that where there was a lot of play there was a worn pump, that heating up took place and the pump would begin leaking. During January, February and March 40 water pumps sold.

Wiper blades tripled in volume. Formerly a few were sold, none in dry weather. Now blades are checked on every car, the ends of the blades closely examined for tear over a couple of inches and warning given the customer that the wind-

(Continued on page 56)

Left: "Your tires are worn and show that you need a front-end alignment," this service salesman points out. This accounts for a lot of the 50% rise in tire sales at this station. Right: A customer is warned about the need for replacing the water pump. This operator sold 40 pumps in the first three months of this year, compared with virtually none earlier.



Chrysler's New Starter Motor

By E. M. LOWERY
Technical Editor

THERE's a new starter motor which you'll be seeing more and more. It's on Chrysler Corp.'s eight-cylinder jobs and is a four-pole, four-field coil compound wound motor.

To clarify the reasons for using a compound wound motor and for an explanation of how this type of design functions, we will briefly review some of the fundamentals of electric motors.

We learned in electrical fundamentals that when the magnetic field in the poles and around the armature windings is the strongest that the greatest force will be exerted to rotate the armature. This rotating or twisting force is called torque.

The series wound motors develop their highest torque at stall or when the armature is stationary. Since the greatest force is required to set a mass in motion, this characteristic is ideal for cranking an automotive engine.

It is also a fact that once a mass is in motion that it can be kept moving and its speed of motion ac-



tually accelerated with considerably less force than was required to start its motion.

The accelerating characteristic is also highly important to starting an

internal combustion engine using a battery, for two reasons:

1.—The air-fuel mixture that is drawn into a cold engine is more readily ignited when compressed at higher speeds than when compressed at slow speed. This is due to the temperature and pressure of the mixture being higher when compressed at faster speeds and, therefore, becoming more combustible.

2.—When starting a cold engine, the current from the battery is highest when the motor is first engaged with the flywheel and cranking begins. At this time, because of this high current draw from the battery, the voltage of the battery drops.

Since the ignition system is parallel to the starting circuit and its voltage supply before the generator starts functioning is also from the battery, the voltage for ignition is also low.

For this reason the efficiency of the ignition is also low at this particular time. This is especially true with a battery that is not fully charged or when the engine is cold. However, once the speed of cranking the engine starts to accelerate, the current in the starting circuit decreases and with this decrease, the voltage drop also becomes less.

The reason that the current in a series motor is at its greatest when the armature is at rest or turning at a very slow speed is because of the low resistance of a series wound motor circuit. But, once the armature starts accelerating, something else occurs that decreases the current.

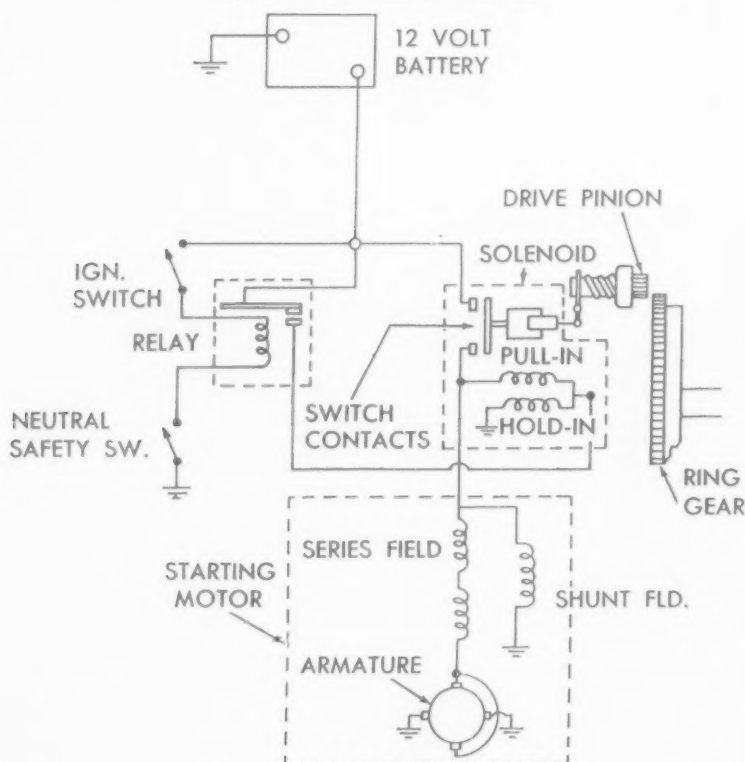
A motor and a generator are actually the same thing. In the case of a generator we apply a mechanical energy to drive it and it produces an electrical energy. When used as a motor the reverse is true. We apply an electrical energy and the motor develops mechanical energy.

A motor, when driven by electrical energy, generates a voltage at the same time. In our study of electrical fundamentals, we found that when a conductor cuts through a magnetic field that a voltage is generated in the conductor.

The windings on the starter motor armature are cutting through a magnetic field; therefore, they will also generate a voltage. However, the voltage that is being generated is in the opposite direction to the voltage that is applied to the starter motor to cause its armature to turn.

With the armature at rest, the

Fig. 1—Here's how the system works.



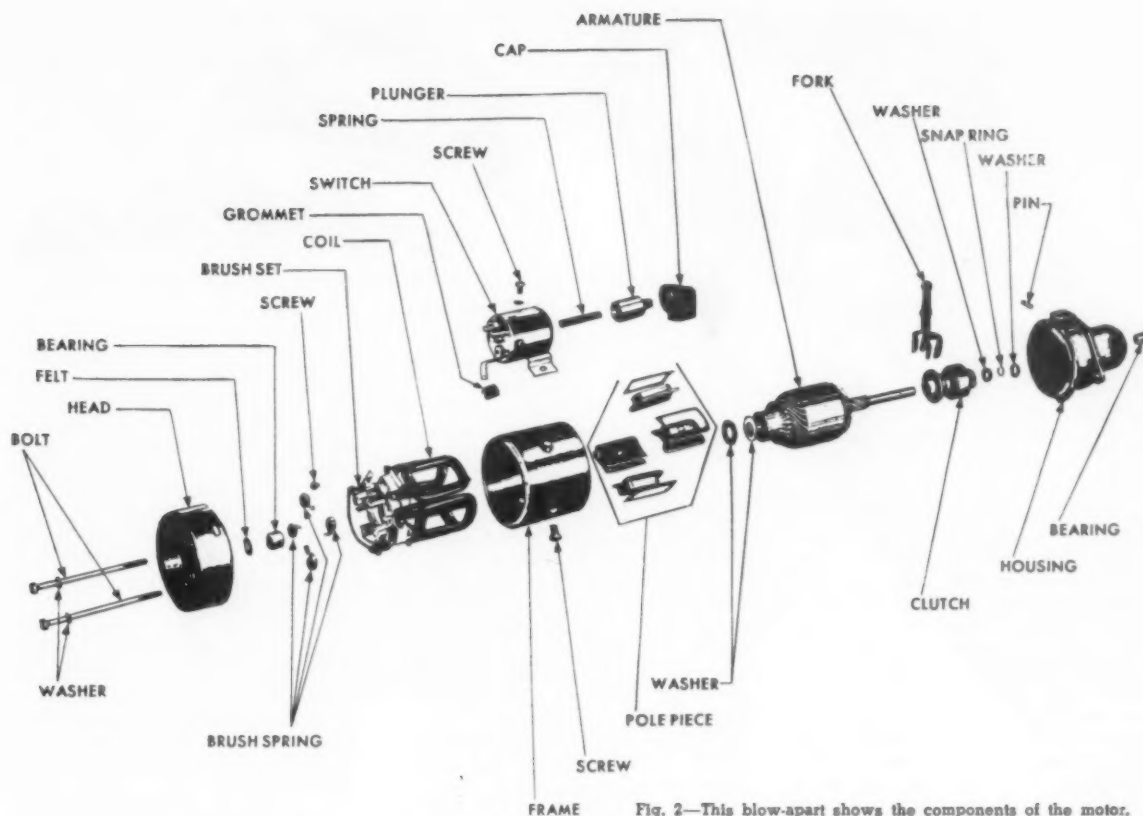


Fig. 2—This blow-apart shows the components of the motor.

only thing that affects the current in the starter motor is the resistance. But, with the armature rotating we also have the effect of this opposing voltage.

It is this opposing voltage that causes the current to become less as the speed of the motor armature increases. The opposing voltage is called counter electromotive force or C.E.M.F.

Of course, the C.E.M.F. can never become greater than the applied voltage to the motor that created it. The force that causes the armature to continue to rotate and in the series wound motors to accelerate is the difference between the applied voltage and the C.E.M.F. voltage.

Remember, however, that with the engine crankshaft rotating it takes less cranking effort to move it. The current that is caused to flow by the difference between the applied voltage and the counter-voltage is not only sufficient to produce crankshaft rotation, but is actually enough to accelerate its speed as the load decreases.

In fact, with a 12-volt system the accelerating speed is so great that after the engine fires and the load is removed, the speed of the armature rotation is so fast that at the

start of its deceleration after the switch is opened it is quite noisy.

To reduce this noise and also to provide ease of engagement of the drive pinion with the flywheel, the addition of another type of winding having a different characteristic than the series motor is being used in these starter motors.

The Chrysler-built starter motors are using one shunt winding and three series windings.

In the series motor the field windings are in series with the armature, hence its name. But in a shunt motor the windings are connected in parallel to the armature.

The shunt field winding has comparatively high resistance and is composed of a large number of turns of fairly small wire. Remember that in series windings there are only a small number of turns of a large

wire.

The determining factor for the strength of the magnetic field other than the pole shoe material, size and the air gap is the number of ampere turns in the winding.

A small number of turns of large wire with a high current will develop a strong field. On the other hand, if a large number of turns of small wires were wound on a similar pole shoe and the same voltage was applied as to the series coil, it can have an equal magnetic strength.

This is true of the Chrysler-built starter. The windings are designed so that the series coils and the shunt coil are in balance when in operation.

Let's summarize the electrical performance of the compound wound motor:

January: Servicing Oil Pumps

Maintaining the correct engine oil pressure through a full knowledge of the oil pump's make-up and how you service it will be Ed Lowery's topic here next month.

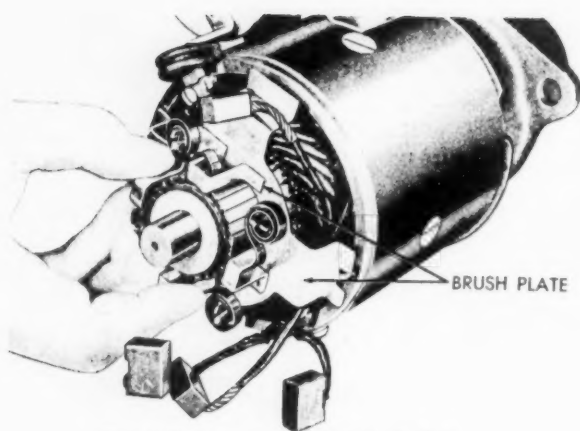


Fig. 3—Removing or installing brush ring.

An increase of cranking load causes less cranking speed, an increase of current through the armature and series field coils and less battery terminal voltage.

A decrease of cranking load causes less drop in battery voltage, less current flowing in the armature and series field coils and the armature or cranking speed increases. The result of these various effects when the cranking load decreases is that the shunt field reacts to hold down or limit the free running speed. This is mostly due to the effect of the counter electromotive force that is generated when the load on the starter motor is light.

The advantages of this type construction provides ease of engagement between the motor drive pinion and the flywheel ring gear and limits the free running speed of the motor. Both of these advantages are helpful in reducing noise.

System operation (Fig. 1):

The positive shift type solenoid is energized by closing the ignition key

starter switch.

Closing the switch completes the circuit through the relay and closes the relay contacts. This connects the 12-volt battery to the two solenoid windings, the pull-in coil and the hold-in coil. These two windings are connected in parallel with each other, but each coil is individually in series with the battery.

The flow of current through the pull-in coil is through the motor armature to ground. The flow of current through the hold-in coil is direct to ground.

The combination of the simultaneous current flow through these two coils provides sufficient magnetic pull to overcome the resistance of the solenoid spring and move the shift lever to engage the drive pinion with the flywheel ring gear.

With a full engagement of the drive with the ring gear, the motion of the solenoid plunger has also compressed the solenoid plunger spring and closed the heavy solenoid starter switch contacts to connect

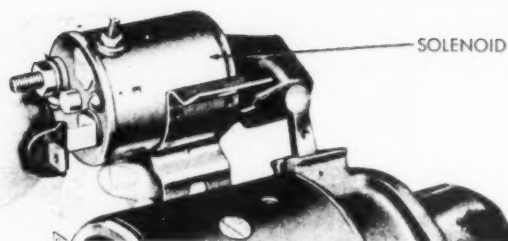


Fig. 4—Removing or installing starter solenoid.

the battery to the starter motor and crank the engine.

In most starting operations the pinion will mesh immediately with the ring gear because of the spiral splines on the armature shaft and in the drive. However, in some instances the pinion gear teeth will abut against the ring gear teeth. This action has been provided for by the compression of the spring on the starter drive.

Compressing the starter drive spring allows the solenoid plunger its full travel to close the solenoid starter switch contacts and cause the motor armature to rotate. The spring-loaded drive will then cause the pinion to mesh with the flywheel ring gear.

It is important to note that as soon as the solenoid starter switch contacts close that the heavy pull-in coil in the solenoid will be bypassed. During the cranking period the current that flowed through the pull-in coil to actuate the solenoid is not required, the hold-in coil having sufficient magnetic strength to hold the drive in mesh.

The result of eliminating this heavy current flow through the pull-in coil during cranking is to reduce the load on the battery.

As soon as the engine fires, the

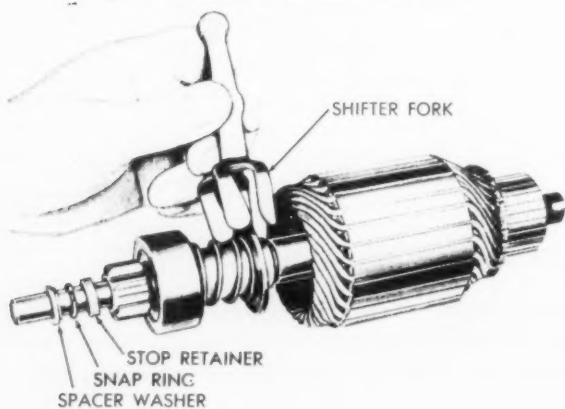


Fig. 5—Removing or installing shifter fork.

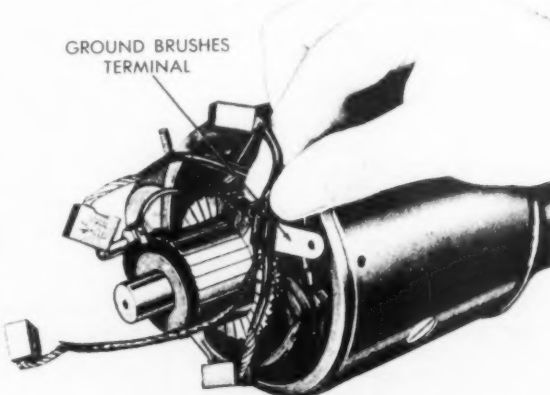


Fig. 6—Removing or installing ground brushes terminal.

SPECIFICATIONS FOR CHRYSLER STARTER MOTORS

Car model usage	RC1, RC2, RC3, RC4, RY1, RS1, RD1 and RP2 with "B" engines (361-383 and 413 cu. in.)	Car model usage	RD1 and RP2 with "A" engines (318 cu. in.)
Starter model	1889200	Starter model	1889100
Starter model		Voltage	12
Voltage	12	No. of fields	4
No. of fields	4	No. of poles	4
No. of poles	4	Brushes	4
Brushes	4	Spring tension	32 to 48 ounces
Spring tension	32 to 48 ounces	Drive	Solenoid shift
Drive	Solenoid shift		Overrunning clutch
End play005" minimum	End play005" minimum
Free running test		Free-running test	
Voltage	11	Voltage	11
Amperage draw78 Amps. maximum	Amperage draw78 Amps. maximum
Minimum speed rpm.	3,800 minimum	Minimum speed rpm.	3,800 minimum
Stall torque test		Stall torque test	
Torque foot-pounds	8.5	Torque foot-pounds	8.5
Voltage	4	Voltage	4
Amperage draw	350	Amperage draw	350
Pinion to housing clearance ..	$\frac{1}{8}$ " plus or minus $\frac{1}{32}$ " between pinion stop and end of pinion	Pinion to housing clearance ..	$\frac{1}{8}$ " plus or minus $\frac{1}{32}$ " between pinion stop and end of pinion
Solenoid switch		Solenoid switch	
Pull-in coil	20.0-22.2 Amps. at 6 volts	Pull-in coil	20.0-22.2 Amps. at 6 volts
Hold-in coil	11.2-12.4 Amps. at 6 volts	Hold-in coil	11.2-12.4 Amps. at 6 volts

overrunning clutch in the drive functions and the compressed solenoid plunger spring moves the shift lever and pulls the drive out of mesh with the flywheel ring gear when the circuit through the relay contacts and hold-in coil is broken by the driver moving the ignition key to the ignition position.

On cars equipped with automatic transmissions, a neutral safety switch is provided.

The starter system tests that are made on cars equipped with Auto-lite starters are the same when the cars are equipped with Chrysler-built starters.

Disassembling the starter:

Remove the through bolts and tap the commutator end head from the field frame (Fig. 2) and remove the thrust washers from armature shaft.

Lift the brush holder springs and remove the brushes from the brush holders and remove the brush plate (Fig. 3). Disconnect the field coil leads at the solenoid connector.

Remove the solenoid attaching screws and remove the solenoid and boot assembly (Fig. 4). Drive out the overrunning clutch shift fork pivot pin. Remove the drive end pinion housing and spacer washer. Note that the narrow legs of the shifter fork are toward the core and then remove the shifter fork (Fig. 5).

Slide the overrunning clutch pinion gear toward commutator end of the armature, drive the stop retainer toward the clutch pinion gear to expose the snap ring and remove the snap ring.

Then slide the overrunning clutch drive from the armature shaft.

If necessary to replace field coils, remove the ground brushes terminal attaching screw and raise the brushes with terminal and shunt wire up and away from field frame (Fig. 6). Remove pole shoe screws with special pole shoe impact screwdriver, tool C-3475.

Cleaning the starter parts:

Do not immerse parts in cleaning solvent. Immersing field frame and coil assembly and/or armature will damage insulation. Wipe these parts with cloth only. Do not immerse drive unit in cleaning solvent. The drive clutch is pre-lubricated at factory and solvent will wash lubrication from clutch. The drive unit may be cleaned with brush moistened with cleaning solvent and wiped dry with cloth.

Brushes and springs — replacement:

Brushes that are worn more than one half the length of the new brush, or are oil-soaked, should be replaced. The brushes and springs can be replaced after removing the commutator end head and brush

plate. However, the spring tension should be measured with the brush holder and brushes in place. Measure the brush spring tension with a spring scale hooked under the spring near the end.

Pull the scale on a line parallel to the edge of the brush and take a reading just as the spring end leaves the brush. Spring tension should be 32 to 48 ounces. Replace springs that do not meet specifications.

Brush springs can be removed by spreading the retainers and disengaging the springs from the retainer legs.

Lift the brushes, disengage the brushes from the brush holders and remove the brush plate.

Disconnect field lead wires at solenoid connector (Fig. 7). Remove the screw attaching the ground brush terminal to the field frame and raise the brushes and terminal up and away from the field frame (Fig. 6).

Note: The leads are not equal in length. Note position of long and short brush leads before cutting to ensure installing leads of proper length at installation and then clip the brush leads at the ground terminal and at the field coils. Open the brush lead retaining clips to remove the old brush leads.

Caution: When resoldering the

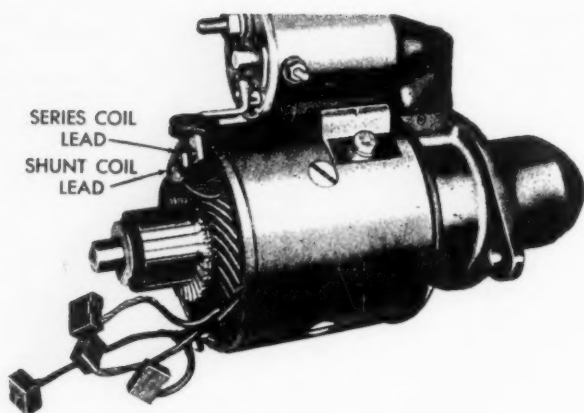


Fig. 7—Field coil leads disconnected from solenoid connector.

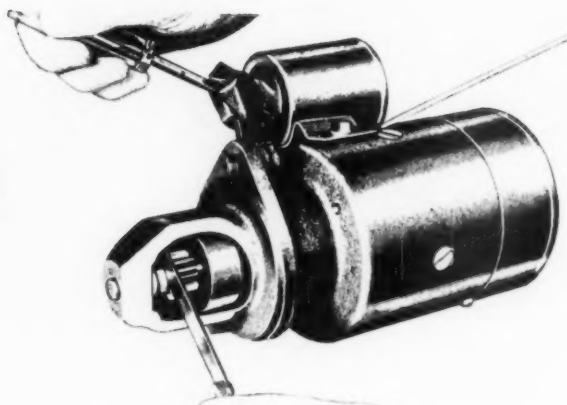


Fig. 8—Checking starter drive pinion clearance.

brush leads, make a strong, low-resistance connection, using a high-temperature solder and resin flux.

Do not use acid. Do not break shunt wire when removing and installing ground brushes.

Replacing the field coils:

A pole shoe impact screwdriver should be used to remove and install field coils to prevent damage to pole shoe screws and for proper tightening. Pole shoes that are loose and not properly seated may cause armature core to rub pole shoes. This will decrease starter efficiency and damage the armature core.

Servicing the bushings:

Poor starter operation, such as slow cranking, is often caused from worn bushings. In many instances this condition is all that is wrong with a starter with a slow cranking complaint.

Inspect armature shaft bearing surfaces and bushings for wear by placing core in vise equipped with soft jaws. Do not squeeze tightly. Try commutator end frame, the drive end frame and armature support bushings for wear by placing them on shafts and checking for side play. Replace commutator end frame and bushing assembly if bushing is worn. Also, replace drive end bushing if it is worn; usually this is the bushing that we use the most. The bushing should be well soaked in SAE 30-W engine oil before it is installed.

Servicing the drive unit:

Place drive unit on shaft and, while holding armature, rotate pinion. The drive pinion should rotate smoothly in one direction (not necessarily easily), but should not rotate in opposite direction. If drive unit does not function properly, or pinion is worn or burred, replace drive unit.

Assembling the starter:

Lubricate the armature shaft and splines with SAE 10-W oil or 30-W rust preventive oil. Install the starter drive, stop collar (retainer), the lock ring and spacer washer. Install shifter fork over the starter drive spring retainer washer with narrow leg of fork toward commutator (Fig. 5). This is important. If fork is not properly positioned, the starter gear travel will be restricted, causing a lockup in the clutch mechanism. Install drive end (pinion) housing on armature shaft, indexing shifting fork with slot in drive end housing and install shifter fork pivot pin.

Install armature with clutch drive, shifter form and pinion housing. Slide armature into field frame until pinion housing indexes with slot in field frame. Install the solenoid and boot assembly. Tighten bolts to 60-70 inch pounds torque.

Install the ground brushes (Fig. 6). Connect the field coil leads at the solenoid connector. Install the brush holder ring indexing tang of ring in hole of field frame.

Position the brushes in brush holders. Be sure the field coil lead wires are properly enclosed behind the brush holder ring and that they do not interfere with the brush operation.

Install thrust washers on commutator end of armature shaft to obtain .010" minimum end play and install commutator end head. Install through bolts and tighten to 40-50 inch pounds.

Adjusting starter drive gear (pinion) clearance:

Note: Place a wedge or screwdriver between the bottom of the solenoid and the starter frame to eliminate all deflection in the solenoid when making the pinion clear-

ance check.

Place starter assembly in vise equipped with soft jaws and tighten vise sufficiently to hold starter.

Push in on solenoid plunger cage (not the fork lever) until the plunger bottoms (Fig. 8) and measure clearance between end of pinion and pin stop with plunger seated and pinion pushed toward commutator end. The clearance should be $\frac{1}{16}$ ". Adjust for proper clearance by loosening solenoid attaching screws and move solenoid fore and aft as required. Test starter operation under a free running test.

Special note: A very simple and accurate procedure for determining the clearance is to connect a 12-volt battery lead to the small terminal at the side of the solenoid and ground the other lead from the battery to the starter housing. This will allow a technician to measure the clearance without having to have extra hands and a periscope.

Installing the starter:

1.—Before installing starter, be sure starter and flywheel housing mounting surfaces are free of dirt and oil. These surfaces must be clean to make good electrical contact.

2.—Install starter to flywheel housing seal.

3.—Install starter from beneath the engine.

4.—Tighten attaching bolts securely.

5.—Attach wires to solenoid switch or starter terminal.

6.—Install battery cable and test operation of starter for proper engine cranking.

These units may be showing up more and more, hence our reason for going into the details here. You'll find them interesting and worthy of your tech knowhow.

Personal Follow-Ups Bring Repeat Jobs

By RUEL McDANIEL

SERVICE volume has increased and a definite step-up in customer good-will is evident as a result of a follow-up program initiated last year by the service department of Hubbard Olds-Cadillac Co., Odessa, Texas.

This program is aside from and in addition to a franchised follow-up plan for the service department calling for the use of a follow-up letter and a questionnaire on a return post card.

This phase is more personal and gets directly to the heart of any complaint a customer may have.

When a mechanic finishes a job, the mechanic's copy of the job ticket goes to the office of Service Manager J. D. Pigg, where he checks it, then delivers it to the service salesman who wrote the ticket.

The salesman then takes the ticket and telephones the customer. He has the ticket before him at the telephone desk and can see exactly what was done on the customer's car and how much it cost.

It requires from 24 to as long as 72 hours for the ticket to make the rounds to the salesman, and when he calls the customer he will have had his car back from the service department as long as 24 hours, but not longer than 72, for it is a strict rule that every customer be contacted within the 72-hour period.

The salesman introduces himself and explains that he is the man who wrote up the customer's service order and he is wondering if the job was entirely satisfactory. In a space down the left-hand side of the ticket he has before him, the salesman writes down the customer's remarks—whether favorable, unfavorable or indifferent.

If the customer is dissatisfied about some phase of the work, the salesman asks him to bring the car back at once and allow the department to check it and make the job satisfactory; this information goes onto the ticket.

"We find that this step in our follow-up program is highly practical," Pigg explained. "That is, having the service salesman who wrote up the ticket contact the customer. It creates a favorable impression on the customer to have the man to whom he talked when he was in the department call him by phone; and if there is something wrong with the job, the service salesman, having written up the ticket, is in better position to discuss the trouble than anyone else—certainly in better position than someone in the office."

"He can talk intelligently about the trouble the customer has found, and his urging the customer to bring the car back has more weight with the customer than if the same invitation came from someone in the office whom the customer has never met."

As a matter of fact, when the company first started this program,

A 72-hour follow-up has stepped up service volume — as well as customer good-will — at this Texas dealership. Follow-ups continue until the customer is satisfied.

calls were by bookkeepers in the service department — girls with pleasant voices but little knowledge of car service terms or procedures.

"It worked all right until a girl called some customer who had a complaint. Then the girl was in deep water and the outcome was not always satisfactory. It was especially confusing when a girl called a woman customer who had a complaint but knew even less about cars than the girl," Pigg said.

Once a service salesman spots a customer who has a gripe, he follows up until the customer brings his car in for a check. After it has been checked, the salesman again telephones the customer, after a lapse of 24 hours or longer, to see if the adjustment was satisfactory. He continues until the customer is satisfied.

"Once in a great while we run across a customer who cannot be made happy," Pigg said, "but we certainly eliminate more than 95% of the complaints which might have arisen and gone unsatisfied if we

(Continued on page 62)

Service salesman Tommy Nichols calls a service customer to see if work he sold was satisfactory. Calls are made within 72 hours after jobs are completed. In a space down the left-hand side of the ticket before him, he writes down the customer's remarks—whether they are favorable, unfavorable or indifferent.



Talk preventive maintenance to Tap More Electrical Orders



TALK preventive maintenance and you'll find more repair jobs coming your way, and that's particularly true with electrical jobs.

The average electrical sale tots up to \$25 at Al's Shell, Wheaton, Md., and the monthly average in such work ranges around \$3,000. Listen to Albert F. Xander, the owner of this station:

"There's a tremendous need for competent electrical work. There's a vast potential in electrical work to be tapped by any garage with the skilled personnel and equipment to handle this volume.

"It does take alertness, mechanical skill and convincing salesmanship, but any ambitious operator can train to do the kind of job that

Albert Xander (right) shows a customer that slow starting is caused by worn and defective spark plugs. Below he sets dwell of points with the aid of motor-analyzing machine.

brings people back, for repeat business is your key to continuous growth. It's the driver who'll come back to you no matter where he's located, no matter how far away. You've got to be good to make him think there's nobody like you.

"You've got to know what you are doing to avoid costly comebacks. And that takes training, the skill that comes with experience and a deep interest in this phase of the automobile."

Xander recommends talking electrical work to the customer as preventive maintenance. He illustrated with an example that had taken place that morning. A woman driver in a flurry drove in asking for gasoline because she was "having trouble starting the car."

Raising the hood, Xander found in a quick visual check that there was no spark, the fan belt had slipped off and distributor cap was burned up. The sale on immediate needs was \$6, and the woman would have hurried off content with no larger outlay. However, Xander inquired when her Plymouth was last taken care of electrically.

He pointed out that a thorough checkup of the electrical system would be money saving, future trouble avoidance, and contribute toward top performance. He underscored the wisdom in not waiting 'til trouble happened. When she consented to having the car put on the motor-analyzing machine, Xander checked compression, dwell, idle speed, timing and going right down the line to output of fuel pump, carburetor, plug wires, condenser, rotor, etc.

Explaining to this woman driver comparative tests on the machine as he indicated the meaning of the needles, he convinced her that she could operate her car more economically and efficiently with a thorough tune-up. A sale of \$25 resulted.

"We often couple a selling talk with a road-test," he said. "As we drive with the customer we point out what is needed electrically for better performance. However, if a customer wants to get by with a very minimum that just keeps his car moving even though we have pointed out serious defects that need correction, we prefer not touching the car. We will not take on responsibility for a halfway job that does not take care of the heart of the trouble."

Selling the Whole Job

He gave this illustration:

A driver who complained of hard starting wanted nothing more than points. When it was shown him that points would not correct his trouble, he was disappointed that Al's Shell would not handle the job. Here was a case that needed spark plugs, points, condenser, carburetor cleaning and adjustment, replacement of spark plug wires and coil wire. This case ultimately ended happily because the customer returned about a week later and submitted his car for Xander's recommendations.

This dealer recommends investment only in new equipment because of the fine instruction and assistance that manufacturer's representatives provide in the follow-up.

Having a \$1,500 investment in equipment, he advises installing a motor analyzer, dwell tachometer, volt ammeter, gas analyzer, vacuum gauge and compression gauge.

"Get all the schooling you can get your hands on," he said. "Every school that the manufacturer offers, every training class that your jobber or wholesaler puts on, will give you added information.

"Go to all of them, regardless of how skillful and experienced you think you are," said Xander, who has been in electrical work 37 years



Here Xander adjusts a carburetor with his tachometer. This operation averages \$3,000 monthly from electrical work. Average sale is \$25.

and never misses a school. "If it is a seven-week course or a three-day school, you get yourself there right in the front row. Make up your mind you are not going to miss a thing.

"If you are going to have the best electrical shop in your area, you've got to have skill in following specifications. Your reputation will depend on how well you keep up with changes and developments. Remember,

this profitable volume will grow only with your steadily developing skill."

A reputation built for electrical work brings much other volume in general automotive repair, according to Xander. Very frequently customers permit an oil change, replacement of tailpipe and muffler, a brake reline you found he needed.

"Electrical work is very profitable work."

This customer is convinced that points are bad by observing tachometer reading. This operator recommends investment in only new equipment.



Steps in Eliminating Sloppy Steering Linkage

By E. S. HARRIS

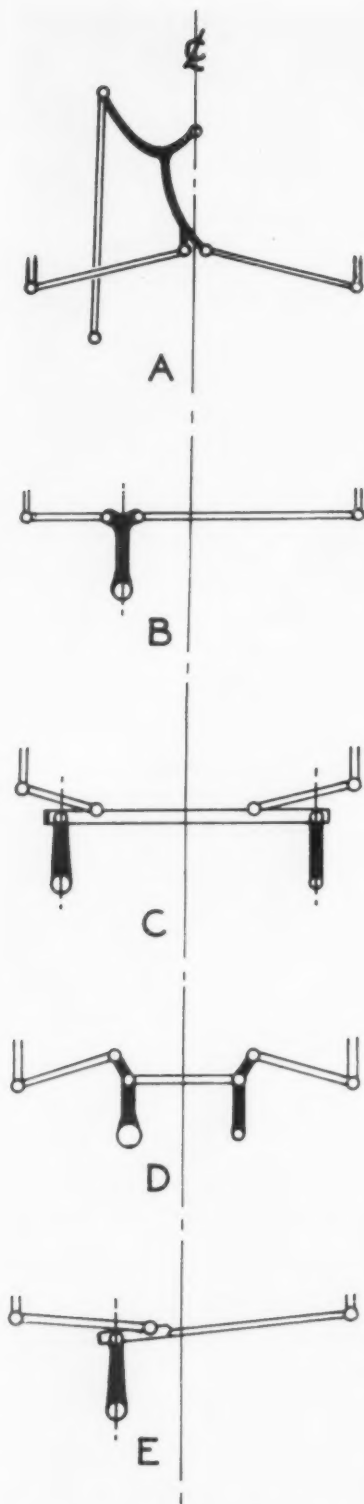


Fig. 1—Typical steering linkages: A—center point steering—intermediate-arm type, B—double ball-type pitman arm, C—relay linkage, D—variation on relay linkage and E—direct center point system.

THE time was—and not too long ago — when steering linkage troubles were easily located and easily repaired. Most passenger cars sported identical linkage to that used on pickups and trucks.

Since they used the front-axle-type suspension, then the pitman arm, drag link, spindle arms and a single tie rod with adjustable ends provided the crop of fixtures. Various manufacturers may have called the parts by different names, but the linkage arrangement was very much the same and the repairs fell into a familiar pattern.

But the steering engineers' design problems were far less simple after the front axle disappeared from passenger cars and the "boulevard ride" and "effortless steering" became the byword and, as ever, the engineers' problems soon became the mechanics' problems. While a completely different type of motion is inherent in the various independent wheel suspension systems than the springing and braking motion in axle- and spring-type vehicles, the steering linkage still has the identical problems of linking the front wheels to the steering gear, insulating the driver from the road shock, maintaining a reasonable wheel alignment with the straight road and providing toe-out on the turns.

In providing these steering requirements, however, the many different types of "monkey motion" of steering linkages and systems used in cars of all ages can produce symptoms that can bewilder the driver and sometimes confuse the steering mechanic if he is not familiar with linkage in question. Since the steering linkage components are controlled by, or control, other steering units, trouble in the other units may be blamed on the innocent linkage, or the linkage may actually be at fault when symptoms point to faulty behavior in other units.

In the simple axle-type steering system the mechanic could put his finger on most troubles by merely

analyzing the symptoms. If the steering radius geometry (toe-out on turns) wasn't uniform and didn't match specifications, he wouldn't be far wrong, in most cases, if he suspected a bent knuckle steering arm. But when diagnosing the problem with the same symptoms on an independently sprung front-end, he may be required to check out tie-rod lengths, off-center intermediate steering arms, idler arms, or whatever other components that go to make up the linkage system on the particular car, but including the steering knuckle arms.

Similarly, on occasions where the steering gear is found to be off the high point, on the axle-type system the mechanic gets the front wheels in the true straight-ahead position and can quickly ascertain if a bent steering arm, drag link, pitman arm, or twisted pitman arm (sector) shaft is at fault. But the same trouble on a more complex steering linkage system will require these same basic checks, plus a run-down inspection of the other linkage points which may be bent or loose enough to get the steering gear off the high point. The trouble may prove to be a bent intermediate arm, on a center point linkage system, or the intermediate arm may be loose on its pivot shaft, the shaft may be loose in its bearings, or the tie rods may be of improper length.

On high-mileage or on older-model cars, worn or loose linkage parts may create a steering problem that is difficult to isolate without a close under-car inspection. A loose intermediate arm may react in such a manner that excessive play may not be felt on the steering wheel if it is turned with the car standing. Yet on a banked or uneven road the wheels may gradually work loose the tie rods against the arm to move it enough on the shaft so that the driver finds his steering wheel must be steered off the high point by an eighth of a turn or more to maintain the straight-ahead position of the front wheels.

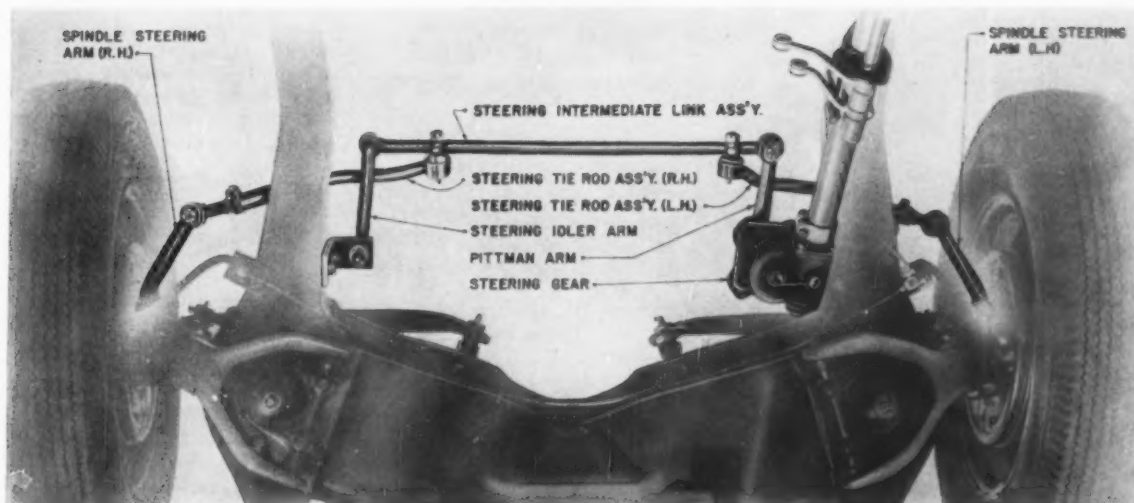


Fig. 2—One type of relay linkage system.

The excessive steering wheel play at this point, comprised of both gear and linkage slack, then makes driving troublesome or even dangerous when driving near a curb or divider which the car might strike, or along a soft shoulder, where "wander" might throw the car into a spin.

If there are several worn and loose points in the linkage, such as tie rod ends, idler arms, etc., this same situation can arise as the driver gradually takes up the slack in all the loose points by turning the steering wheel in order to maintain a straight-ahead position of the front wheels, which are in turn working against a banked roadbed.

Safe steering is everybody's responsibility, since a wandering or runaway vehicle endangers everyone in the vicinity, and the millions of older cars operating on the streets and highways must be kept as reliable as the newer models which must operate on the same streets and highways. The mechanic may not be in possession of the steering linkage adjustment specifications for all the older cars he must service, but there are certain basic adjustments and inspections that he can make that are common to all linkage systems, and the car's safety can be assured if they are properly made:

1.—Check all ball joints by using sufficient pressure and leverage to locate wear and looseness. Inspect arms and rods for bends.

2.—Check that all ball joint clamp bolts and nuts are tight, and that joint alignment allows free movement.

3.—Turn wheels from right to left and left to right through full travel and see that steering stops are adjusted so tires can't rub on chassis; watch linkage does not rub chassis and that steering gear is not bottoming in its housing.

4.—With front wheels in straight-ahead driving position the steering gear must be located on its "high spot" center.

5.—Steering geometry check should indicate a uniform swing of the wheels in both directions for proper toe-out on turns.

These basic requirements must be

met in any inspection, even though other corrective steps, including specific tie rod length measurements and steering arm positions, are indicated in factory specs.

For instance, a center point steering system with an intermediate steering arm mounted to the frame front crossmember will require that the two tie rod ball joints on the intermediate steering arm must straddle the center line of the vehicle (A in Fig. 1) when the wheels are in the straight-ahead position. It then must follow that the drag link must be the correct length to

"Watch this. He'll have him apologizing and offering him a tip before he's through with that customer."



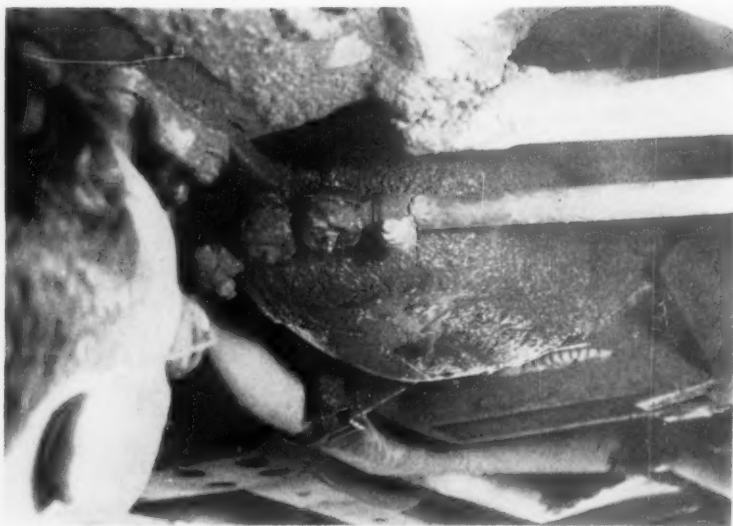


Fig. 3—Linkage on older cars must be inspected for looseness and alignment for safe steering.

place the steering gear in its high point center.

If the intermediate steering arm is off-center, then a toe-out on turns error, identical to that caused by a bent knuckle arm, will be indicated on the instruments. Resultant tire wear indications are also identical to toe-out on turns wear caused by a bent steering knuckle arm. The type of tire wear will depend on which side the intermediate arm is off center, just as it differs with which knuckle arm is bent.

On the double-ball, pitman-arm-type linkage, consisting of a long and a short tie rod linking each knuckle arm directly to the pitman arm (B in Fig. 1), factory specifications indicating the proper length of the tie rods may not be available. It is known that the pitman arm centerline should be parallel to the centerline by the vehicle when the wheels are in the straight-ahead driving position and the steering gear is on the high point center.

In order to adjust the linkage without the specifications indicating the desired tie rod lengths (ball joint center-to-center) but with the knowledge that the long tie rod length adjustment is used to center the steering, while the short tie rod is used to obtain the proper toe-in, the mechanic can proceed as follows:

- 1.—Use instruments to check and assure that toe-in is correct.
- 2.—Swing wheels in each direction to make toe-out on turns geometry check. Note the error.
- 3.—Loosen the tie rod end clamp

bolts on both tie rods, chalk a reference mark on each rod and turn each rod an equal number of turns in the same direction.

4.—Recheck toe-out geometry. Compare readings to see if better or worse than original reading. Correct direction of turn is thus indicated.

5.—Turn tie rods in indicated direction an equal number of turns to obtain correct geometry. Tighten tie rod end clamp bolts securely, and recheck both toe-in and toe-out on turns readings.

The above "long" method of placing steering on the high point and centering the linkage is necessary only when the specified tie rod lengths are not known.

The popular relay system linkage (C in Fig. 1) operates around a relay rod which is connected at one end to a pitman arm and at the other to an idler arm mounted on the opposite side of the frame. Two tie rods connected to opposite knuckle arms then are connected to the relay rod. These tie rods may be of equal or unequal length. The pitman arm and idler arm are parallel to the vehicle center line when the steering gear is on the high point and the wheels are in the straight-ahead driving position.

The two tie rods must be adjusted to the proper length to keep the steering gear, front wheels and steering arms in this relationship. Toe-in should not be given its final adjustment until it is ascertained that the toe-out geometry is uniform on turns in either direction.

Some few older vehicles make use of a relay system similar to the above, except that the two tie rods are not adjustable while a relay rod or center tie rod, which is linked to both the pitman arm and the idler arm, is adjustable (D in Fig. 1). Changing the length of this center tie rod controls the toe-in adjustment. A bent outer tie rod on this type system would result in the same toe-out on turns error as a bent knuckle arm, either of which can be easily located.

The direct center point linkage

"I prescribe a good, long rest for your car—in a junkyard."



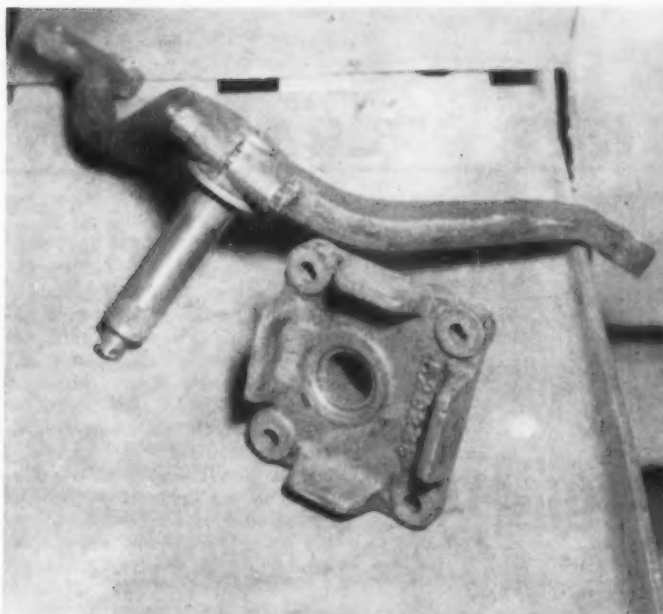


Fig. 4—Intermediate arms may be loose on shaft, shaft may be loose in bearings, or housing may be loose on frame.

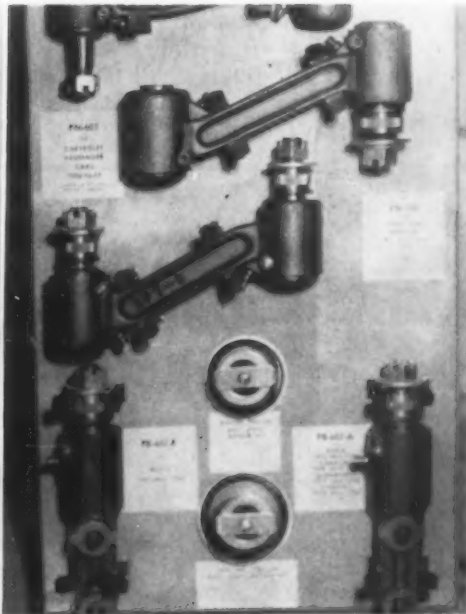


Fig. 5—Linkage replacement part kits simplify selling the job.

system consists of one long tie rod connected directly to the right knuckle arm and the single ball pitman arm (E in Fig. 1). A short tie rod is connected to the left steering knuckle and to a point near the centerline of the vehicle on the long tie rod.

Both tie rods have adjustable ends at the outer (knuckle arm) ends; therefore it is necessary to keep the system centralized with the steering gear on the high point while making toe-in adjustments.

To make a toe-in adjustment, first locate the steering gear on the high point. With the gear in this position, change the length of the right tie rod until the right wheel is in the straight-ahead position. Change the length of the left tie rod until the left wheel is in the straight-ahead position. Now adjust to the desired toe-in by turning each threaded sleeve an equal amount.

These few linkage systems and the variations on these basic systems are the problems that will be encountered by the mechanic inspecting for tire wear or steering complaints. With a working idea of the steps to be followed to effect an adjustment of each system, he can accomplish the adjustments with confidence that the job will behave properly on the road.

But while these systems were developed to protect the driver from road shocks, it must be remembered

that in absorbing these shocks in the linkage, wear and looseness are sure to appear after use. So the mechanic inspects closely for worn and loosened parts on every job, using the same reasoning for locating possible wear points and looseness that he uses in making adjustments to the individual systems.

Intermediate arms take a severe beating so may possibly be found loosened on the shaft (which may be mistaken for a worn shaft or shaft bearing) and simply tightening them may save them if they have not been working loose long enough to wear out the hole until the clamp bolt cannot hold them firmly on the shaft. Some shaft bearings are adjustable; others must be replaced when loose. Looseness at this point results in considerable play of the steering wheel, so correction is vital for safe steering.

Tie rod ends must fit snugly internally and their clamp bolts must be tight. Wear or looseness at either point can result in tire wear and steering complaints. Accumulated wear in two or more ends can give the toe-in a complete switch when rolling down the highway, even though the reading is correct with the vehicles standing.

Idler arms are also prime wear points and may need replacement at lower mileages than expected. The only way to be sure is to check them. A lot of steering gear move-

ment can be absorbed in moving worn linkage parts until they take hold and start moving the wheels.

When speaking of alignment and steering problems, we usually think of the steering gear and suspension parts. While these parts are important, don't let us forget that the linkage that connects them is every bit as important to the proper functioning of the steering system.

Use Vinegar to Chase Oil on Windshield

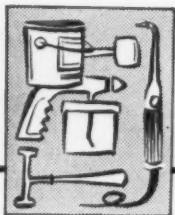
PONTIAC has issued this service bulletin:

The presence of an oily film on the inside surfaces of all body glass can result in difficult and/or hazardous vision. This is especially noticeable when driving at night or during the day when heading into the sun.

The oily film can be readily removed by first washing the glass thoroughly with vinegar until the film is loosened, then wiping the glass with a clean cloth until all traces of the haze is removed.

START THE YEAR RIGHT!

Start the year rolling right by tackling a new source of income. That's one way to make the lady of the house happy. See page 91.



BODY SHOP OPERATIONS

Minimizing Air and Water Leaks by— Correcting Door, Regulator and Quarter Glass Ills

By E. M. LOWERY
Technical Editor

MISALIGNED door and quarter glasses and hard-to-operate regulators not only cause air and water leaks but they usually result in broken glass.

Knowing the correct procedure for servicing these parts will allow the mechanic to "cut corners" and save time. Here's how it's done, dealing specifically with the 1960 Ford and using the illustrations pertaining to that line:

Rear door glass, regulator and frame:

Glass replacement:

The door must be properly adjusted to the body opening before any glass and/or frame adjustments are made.

1.—Remove the trim panel and loosen the water shield to uncover the access holes.

2.—On all models, lower the glass about halfway, disconnect the regulator arms from the glass channel rollers and lower the window to the stop (Fig. 1).

3.—Remove the lower stop and lower the window to the bottom of the door.

4.—On a model 75, remove the dovetail from the forward edge of the glass channel (Fig. 2).

5.—Remove the glass by raising the front part of the glass until it clears the run and then lift the assembly out of the door.

6.—If the glass itself is to be replaced, use a tool such as the one

shown in Fig. 3. When installing the channel, use new glass tape between the channel and the glass. On a model 75, remove the three channel joint screws before removing the channel.

7.—Transfer the rollers to the new door glass channel.

8.—Position the glass in the door and install the lower stop (and the dovetail on a model 75).

9.—Raise the window about halfway and connect the regulator arms. Apply a coating of Lubriplate to the rollers.

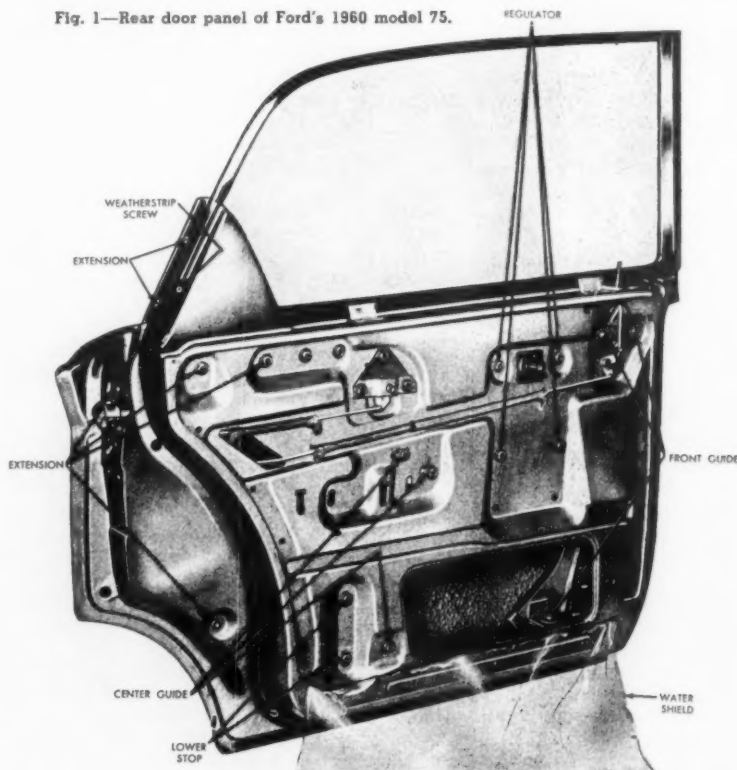
10.—Check the operation of the window and adjust as necessary.

11.—Apply sealer to existing holes and around the door handle and regulator shafts. Install the water shield, using cement M-2G17-A, if needed. Install the trim panel.

Glass adjustment:

The door must be properly ad-

Fig. 1—Rear door panel of Ford's 1960 model 75.



justed to the body opening before any glass and/or frame adjustments are made.

Vertical adjustments:

To level the window with the belt line, raise or lower the equalizer arm bracket (or move the center guide fore or aft on model 75). If necessary, on a model 75, adjust the upper stop accordingly.

To limit window travel, adjust the lower stop and, in addition, the upper stop on a model 75. On this model also adjust the dovetail and dovetail striker (Fig. 2). On models 54, 58 and 71, the top run provides an upper limit to glass travel.

Fore-and-aft adjustments:

To move the glass fore or aft on a model 75, loosen the two set screw nuts at the upper end of the front guide and the three center guide mounting screw and washer assemblies. Loosen the extension mountings (Fig. 1) and move the glass fore or aft to get a snug fit in the extension run and even spacing between the front and rear windows above the belt line. Tighten all mountings.

On models 54, 58 and 71 the glass by itself is not adjustable fore and aft. Limited fore-and-aft adjustment of the door glass and frame can be gotten by loosening the five frame mountings, adjusting as required and then tightening the mountings.

Lateral (in-and-out) adjustments:

To make lateral adjustments of the door glass frame and the door glass on models 54, 58 and 71, loosen the five frame mountings. At the frame rear lower mounting, use an Allen wrench to turn the set screw as required and then tighten the lock nut. Next, tighten the frame upper mountings and then lower the glass and tighten the other mountings.

On a model 75, loosen the four extension mountings, the three front guide mountings and the three center guide mountings (Fig. 1). With the glass lowered, use an Allen wrench to adjust the set screw at the lower end of the extension as required and tighten the lock nut. Adjust the lower end of the front guide and tighten the bolt. With

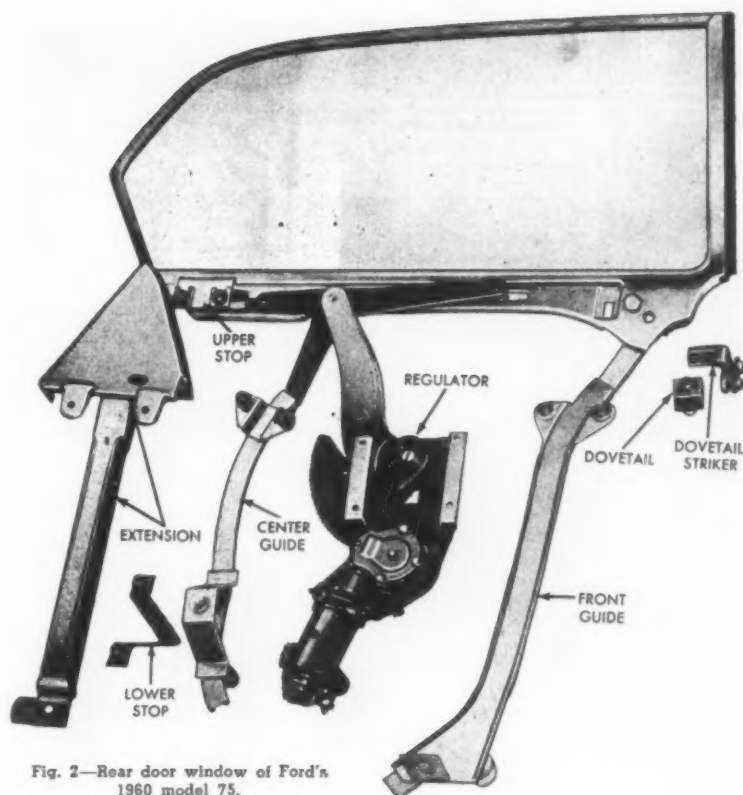


Fig. 2—Rear door window of Ford's 1960 model 75.

the glass lowered, use an Allen wrench to adjust the set screws at the upper end of the front guide and then tighten the other mountings.

Regulator replacement:

1.—Remove the trim panel and loosen the water shield to uncover the access holes.

2.—Lower the glass about halfway, disconnect the regulator arms and support the window in raised position.

3.—Remove the regulator retaining screws, slide the equalizer arm out of the bracket (models 54, 58 and 71) or the guide (model 75), and remove the regulator through the door access hole (Fig. 2).

4.—Position the regulator in the door, engaging the equalizer arm, and install the retaining screws. Apply a coating of Lubriplate to the rollers.

5.—Lower the glass and connect the regulator arms.

6.—Check the operation of the glass and adjust it as necessary.

7.—Apply sealer M-5397-B to existing holes and around the door handle and regulator shafts. Install the water shield, using cement M-2G17-A as necessary. Install the trim panel.

Frame replacement:

1.—Remove the trim panel and loosen the water shield to uncover the access holes.

2.—Lower the glass and remove weatherstrip from window frame.

3.—Remove the frame retaining screw which is situated at the inside rear part of the belt line.

4.—Remove the three door glass frame retaining screw and washer assemblies, remove the nut from the frame adjustment screw and remove the frame from the door.

5.—Transfer the moldings and runs to the new frame.

6.—Position the frame in the door and loosely install the frame retaining screws. Install the nut on the adjusting screw, adjusting the frame for proper lateral (in-and-out) position.

7.—After checking window operation and making any necessary fore-

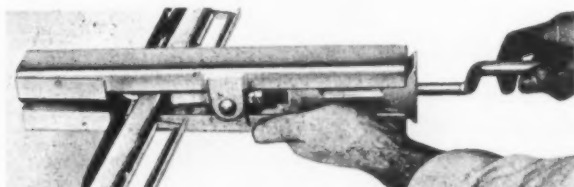


Fig. 3—Glass channel replacement.

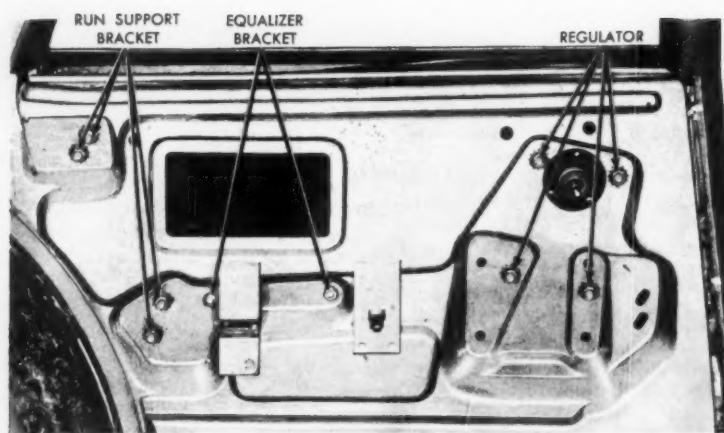


Fig. 4—Quarter panel of 1960 Ford models 59, 62 and 64.

and-aft or vertical adjustment, tighten the remaining mountings.

8.—Clean the weatherstrip with solvent. Using 8A-19552-B cement on the weatherstrip surfaces and on the frame surfaces, install the weatherstrip on the frame.

9.—Apply sealer M-5397 to existing holes and around the door handle and regulator shafts. Install the water shield, using cement M-2G17-A if needed. Install the trim panel.

Extension replacement:

1.—Remove the trim panel and loosen the water shield to uncover the access holes.

2.—Remove the weatherstrip retaining screw from the extension, and pull the weatherstrip away from the extension (Fig. 1).

3.—Remove the extension retaining screw from the outside of the door, the extension retaining screw and washer assemblies (near the belt line) and the set screw lock nut (Fig. 1).

4.—After turning the set screw in far enough for clearance at the inner panel, remove the extension assembly from the door.

5.—Disassemble the extension and transfer the usable parts to the new extension.

6.—Position the new extension in the door and install the mountings loosely.

7.—Adjust the lateral (in-and-out) position of the extension by means of the adjustment screw, and tighten the rest of the mountings.

8.—Using 8A-19552-B cement on the weatherstrip surface and on the metal surface, cement the weatherstrip to the extension. Install the weatherstrip retaining screw.

9.—Install the water shield and the trim panel.

Quarter glass, regulator and run

(or guide):

Glass replacement:

The door must be properly adjusted to the body opening before any glass adjustments are made.

1.—Remove the rear seat cushion, the seat back and the quarter trim panel.

2.—Loosen the water shield to uncover the access holes and lower the window as necessary to disconnect the regulator arm(s) from the glass channel.

3.—On a model 63, remove the upper stop. With the glass lowered, disconnect the secondary guide arm from the guide. Remove the lower corner weatherstrip and remove the glass. On a model 59 or 64, remove the window.

4.—If the glass or channel is to be replaced, use a tool similar to the one shown in Fig. 3. When installing the channel, use new glass tape between the channel and the glass.

5.—With the rollers in the channel

or guides, position the glass in the quarter panel. On a model 63, position the secondary guide arm roller in the lower end of the guide. Loosely install the upper stop and install the lower corner weatherstrip. On a model 64, connect the regulator arms.

6.—Check the operation of the window and, if necessary, adjust it as outlined below.

7.—Apply sealer M-5357-B to existing holes and around the regulator shaft. Install the water shield, using cement M2G17-A if needed. Install the trim panel.

8.—Install the seat back and the seat cushion.

Vertical adjustments:

To limit lower travel of a model 59, 62 or 64 electrically operated quarter window, adjust the position of the lower stop, which is situated near the regulator.

To limit lower travel of a model 63 electrically operated quarter window, adjust the position of the stop situated near the regulator. To adjust the upper limit of vertical travel on any model 63 quarter window, loosen the front guide mountings and move the guide up or down.

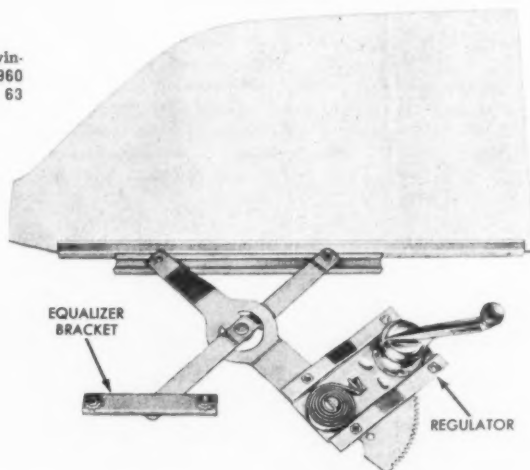
Lateral (in-and-out) adjustments:

For lateral adjustment of a model 63 quarter window, loosen the lock nuts at the front guide upper mounting and at the rear guide upper mounting. Turn the set screws to get the desired fit at the roof and at the door window, and then tighten the lock nuts.

Fore-and-aft adjustments:

Model 63 quarter window fore-and-aft movement can be controlled by adjusting the rear guide mountings and the stop situated near the

Fig. 5 — Quarter window mechanism of 1960 Ford, except models 63 and 76.



belt line.

On a model 59, 62 or 64, fore-and-aft fit of the glass within the runs may be adjusted by fore-and-aft movement of the upper and lower run support brackets (Fig. 4). Adjust the lower bracket with the window lowered and adjust the upper bracket with the window raised.

Regulator replacement:

Models 62 and 64:

1.—Remove the rear seat cushion and back.

2.—Remove the trim panel and pull water shield away from the access holes.

3.—Lower the window and disconnect the regulator from the glass channel rollers (Fig. 5).

4.—Raise the window by hand and support it in the raised position.

5.—Remove the regulator retaining screws (Fig. 4), slide the regulator arm out of the equalizer bracket and remove the regulator.

6.—Position the regulator inside the quarter panel, engage the arm in the equalizer bracket and install the regulator retaining screws.

7.—Position the rollers in the glass channel, lower the window and connect the regulator to the rollers.

8.—Adjust the rear run.

9.—Apply sealer M-5397-B to existing holes and around the regulator shaft. Install the water shield, using cement M-2G17-A, if necessary. Install the trim panel.

10.—Install the seat cushion and back.

Model 63:

1.—Remove the rear seat cushion, the seat back and the trim panel and pull the water shield away from the access holes.

2.—Lower the window and disconnect the regulator from the glass channel.

3.—Raise the window by hand and support it in the raised position.

4.—Remove the regulator retaining screws and remove the regulator.

5.—Position the regulator, install the retaining screws, lower the window and connect the regulator to the channel.

6.—Check the operation of the window and adjust it, if necessary.

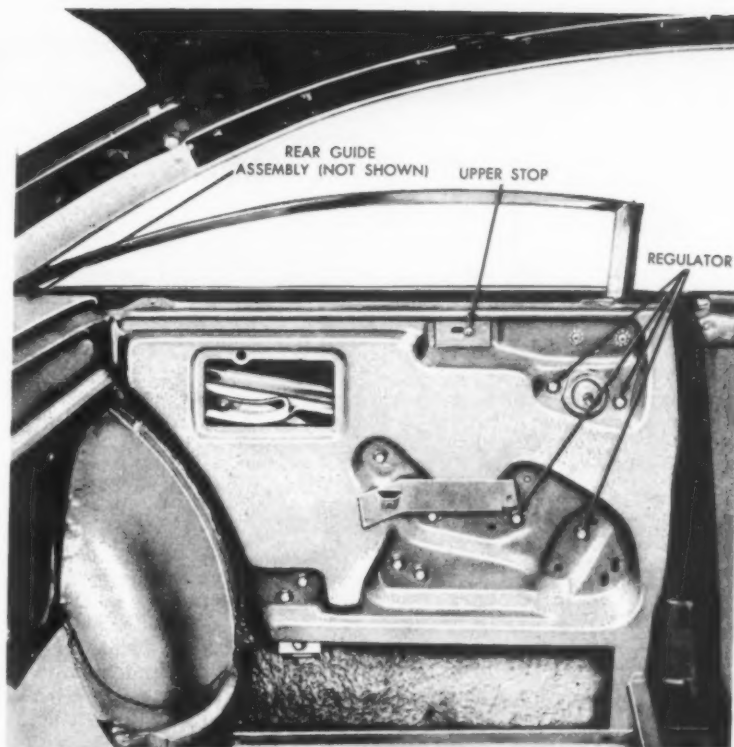


Fig. 6—Quarter panel of Ford's 1960 model 63.

7.—Apply sealer M-5397-B to existing holes and around the regulator shaft. Install the water shield, using cement M-2G17-A, if necessary. Install the trim panel.

8.—Install the seat cushion and the seat back.

Front guide replacement:

1.—Raise the window and remove the seat cushion and the quarter trim panel. Loosen the water shield to uncover the access holes.

2.—Remove the front guide upper mounting nuts and the lower mounting bolts (Fig. 6).

3.—Thread the set screws into the guide for clearance and remove the guide.

4.—Position the guide in the quarter panel and loosely install the lower mounting bolts.

5.—Thread the set screws part of the way out and loosely install the lock nuts.

6.—Make lateral and fore-and-aft adjustments of the guide and tighten mountings. Check glass operation.

7.—Apply sealer M-5397-B to existing holes and around the regulator shaft. Install the water shield, using cement M-2G17-A, if necessary. Install the trim panel.

8.—Install the seat cushion.

Front run replacement:

1.—Remove the rear seat cushion and seat back.

2.—Remove the quarter trim panel, pull the water shield away from access holes; lower window.

3.—Remove the rear run lower support bracket screws and slide the window to the rear (Fig. 4).

4.—Remove the three front run upper retaining screws and the lower retaining screw. Remove run.

5.—Position the run, install the four retaining screws and move the window forward.

6.—After adjusting the lower end of the rear run, install the lower support bracket screws.

7.—Raise the glass and adjust the rear run upper bracket.

8.—Apply sealer M-5397-B to existing holes and around the regulator shaft. Install the water shield, using cement M-2G17-A, if necessary. Install the trim panel.

9.—Install seat cushion and back.

January: Adjusting Lancer, Valiant

Servicing the Lancer and Valiant bodies, including how to hoist and jack, as well as adjusting various body components, will be aired out here next month.

1961 PASSENGER-CAR SPECIFICATIONS

(Souped-Up Specs on Standard Models Are Not Listed)

MAKE/AND MODEL	Std. Wheelbase	TREAD		No. Cylinders and Valve Arrangement	Bore and Stroke	ENGINE			Piston Displace- ment (Cu. In.)	Standard Com- pression Ratio	FLUID CAPACITIES				WHEEL ALIGNMENT		
		Front	Rear			Teasdale H. P.	Max. Rated H. P. at R. P. M.	Max. Torque at R. P. M.			Crankcase Cap. (Qtz.)	Transmission (Au.) (Pts.)	Fuel Tank (Gals.)	Cooling System (No Heater) (Qtz.)	Caster (Degrees)	Camber (Degrees)	Toe-In (In.)
BUICK Special	112	56	56	V81	3.50x2.80	39.2	155@4600	220@2400	215	8.8-1	4	12	16	12	— $\frac{3}{4}$	0 to $\frac{1}{4}$	$\frac{1}{8}$ to $\frac{1}{4}$
BUICK Le Sabre	123	62	61	V81	4.125x4.3	54.45	250@4400	384@2400	364	10.25-1	4	24	20	17	— $\frac{1}{2}$	$\frac{1}{4}$	$\frac{1}{8}$ to $\frac{1}{4}$
BUICK Invelta	123	62	61	V81	4.1875x3.64	56.11	325@4400	445@2400	401	10.25-1	4	24	20	17	— $\frac{1}{2}$	$\frac{1}{4}$	$\frac{1}{8}$ to $\frac{1}{4}$
BUICK Electra	126	62	61	V81	4.1875x3.64	56.11	325@4400	445@2400	401	10.25-1	4	24	20	17	— $\frac{1}{2}$	$\frac{1}{4}$	$\frac{1}{8}$ to $\frac{1}{4}$
CADILLAC 62 Sedan, 62 Coupe, 62 Coupe de Ville, 62 Sedan de Ville, 60 Fleetwood, 62 Eldorado and Biarritz	129.5	61	61	V81	4x3.875	51.2	325@4800	430@3100	390	10.5-1	5	18	21	18 $\frac{1}{2}$	— $\frac{1}{2}$ to — $\frac{1}{2}$	F	$\frac{1}{8}$ to $\frac{1}{4}$
CADILLAC Fleetwood 75	149.8	61	61	V81	4x3.875	51.2	325@4800	430@3100	390	10.5-1	5	18	21	18 $\frac{1}{2}$	— $\frac{1}{2}$ to — $\frac{1}{2}$	F	$\frac{1}{8}$ to $\frac{1}{4}$
CHEVROLET 6	119	60.3	59.3	61	3.56x3.94	30.4	135@4000	217@2000	235.5	8.25-1	5	9	20	17	0 to $\frac{1}{2}$	+30' to +30'	$\frac{1}{8}$ to $\frac{1}{4}$
CHEVROLET 8 (263 cu. in.)	119	60.3	59.3	V81	3.875x3	48	170@4200	275@2200	283	8.5-1	4	9	20	17 $\frac{1}{2}$	0 to $\frac{1}{2}$	+30' to +30'	$\frac{1}{8}$ to $\frac{1}{4}$
CHEVROLET 8 (348 cu. in.)	119	60.3	59.3	V81	4.125x3.25	54.5	250@4400	355@2800	348	9.5-1	4	19	20	21	0 to $\frac{1}{2}$	+30' to +30'	$\frac{1}{8}$ to $\frac{1}{4}$
CHEVROLET Corvair	108	54	54	6A	3.4375x2.6	28.4			145	8-1	4	6	14	3 to $\frac{1}{2}$	$\frac{1}{2}$ to $\frac{1}{2}$	$\frac{1}{8}$ to $\frac{1}{4}$	
CHEVROLET Corvette	102	57	59	V81	3.875x3	48	230@4800	300@3000	283	9.5-1	5	9	16.4	15 $\frac{1}{2}$	2 to 30'	0 to 30'	0
CHRYSLER Newport	122	61	59.7	V81	4.12x3.38	54.3	265@4400	380@2400	361	9-1	5	22	23	16	C	B	$\frac{1}{8}$
CHRYSLER Windsor	122	61	59.7	V81	4.25x3.38	57.8	305@4600	410@2400	383	10-1	5	22	23	16	C	B	$\frac{1}{8}$
CHRYSLER New Yorker	129	61.2	60	V81	4.18x3.75	55.9	350@4600	470@2800	413	10-1	5	22	23	16	C	B	$\frac{1}{8}$
CHRYSLER Imperial	129	61.8	62.2	V81	4.18x3.75	55.9	350@4600	470@2800	413	10-1	5	22	23	16	C	B	$\frac{1}{8}$
COMET (144.3 cu. in.)	114	55	54.5	61	3.5x2.5	29.4	85@4200	134@2000	144.3	8.7-1	3 $\frac{1}{2}$	15	14	8.7	1 $\frac{1}{2}$ to $\frac{1}{2}$	0 to $\frac{1}{2}$ to $\frac{1}{2}$	$\frac{1}{8}$ to $\frac{1}{4}$
COMET (170 cu. in.)	114	55	54.5	61	3.5x2.94	29.4	101@4400	156@2400	170	8.7-1	3.5	15	14	8.7	1 $\frac{1}{2}$ to $\frac{1}{2}$	0 to $\frac{1}{2}$ to $\frac{1}{2}$	$\frac{1}{8}$ to $\frac{1}{4}$
DE SOTO	122	61	59.7	V81	4.12x3.38	54.3	265@4400	380@2400	361	9-1	5	22	20	16	C	B	$\frac{1}{8}$
DODGE Lancer	106.5	56	55.5	61	3.4x3.125	27.7	101@4400	155@2400	170	8.2-1	4	15	13	11	C	B	$\frac{1}{8}$
DODGE Dart 6	118	61.5	60.1	61	3.4x4.125	27.7	145@4000	215@2800	225	8.2-1	4	15	20	13	C	B	$\frac{1}{8}$
DODGE Dart 8	118	61.5	60.2	V81	3.91x3.31	48.9	230@4400	340@2400	318	9-1	5	20	20	13	C	B	$\frac{1}{8}$
DODGE Polara	122	61.5	60.2	V81	4.12x3.38	54.3	265@4400	380@2400	361	9-1	5	19	20	16	C	B	$\frac{1}{8}$
FORD Fairlane 6	119	61	60	61	3.62x3.6	31.54	135@4000	200@2000	223	8.4-1	4	20	20	15	$\frac{1}{2}$	$\frac{1}{4}$ to 1	$\frac{1}{8}$ to $\frac{1}{4}$
FORD Fairlane 500 8 and Galaxie (292 cu. in.)	119	61	60	V81	3.75x3.3	45	175@4200	279@2200	292	8.8-1	5	20	20	19	$\frac{1}{2}$	$\frac{1}{4}$ to 1	$\frac{1}{8}$ to $\frac{1}{4}$
FORD Fairlane 500 8 and Galaxie (352 cu. in.)	119	61	60	V81	4x3.5	51.2	220@4400	336@2400	352	8.9-1	5	20	20	19.5	$\frac{1}{2}$	$\frac{1}{4}$ to 1	$\frac{1}{8}$ to $\frac{1}{4}$
FORD Fairlane 500 8 and Galaxie (390 cu. in.)	119	61	60	V81	4.05x3.78	52.49	300@4600	428@2800	390	9.6-1	5	20	20	19.5	$\frac{1}{2}$	$\frac{1}{4}$ to 1	$\frac{1}{8}$ to $\frac{1}{4}$
FORD Falcon (170 cu. in.)	109.5	55	54.5	61	3.5x2.94	29.4	101@4400	156@2400	170	8.7-1	4 $\frac{1}{2}$	12 $\frac{1}{2}$	14	8.7	$\frac{1}{2}$ to $\frac{1}{2}$	$\frac{1}{4}$ to $\frac{1}{2}$	$\frac{1}{8}$ to $\frac{1}{4}$
FORD Thunderbird	113	61	60	V81	4.05x3.78	52.49	300@4600	427@2800	390	9.6-1	5	20	20	19.5	$\frac{1}{2}$ to $\frac{1}{2}$	$\frac{1}{4}$ to $\frac{1}{2}$	$\frac{1}{8}$ to $\frac{1}{4}$
FORD Falcon (144.3 cu. in.)	109.5	55	54.5	61	3.5x2.5	29.4	85@4200	138@2000	144.3	8.7-1	4 $\frac{1}{2}$	3 $\frac{1}{2}$	14	8.7	— $\frac{1}{4}$ to — $\frac{1}{4}$	0 to +1	$\frac{1}{8}$ to $\frac{1}{4}$
LINCOLN Continental	123	62.1	61	V81	4.3x4.7	59.17	300@4100	465@2000	430	10-1	5	23	21	22	0 to —90'	0 to 45'	.063 to .188
MERCURY Meteor 600	120	61	60	61	3.62x3.6	31.54	135@4000	200@2000	223	8.4-1	4	19	20	15	$\frac{1}{2}$	+ $\frac{1}{4}$ to +1	$\frac{1}{8}$ to $\frac{1}{4}$
MERCURY Meteor 600 and Monterey (292 cu. in.)	120	61	60	V81	3.75x3.3	45	175@4200	279@2200	292	8.8-1	5	20	20	19	$\frac{1}{2}$	+ $\frac{1}{4}$ to +1	$\frac{1}{8}$ to $\frac{1}{4}$
MERCURY Meteor 600 and Monterey (352 cu. in.)	120	61	60	V81	4x3.5	51.2	220@4400	336@2400	352	8.9-1	5	20	20	19.5	$\frac{1}{2}$	+ $\frac{1}{4}$ to +1	$\frac{1}{8}$ to $\frac{1}{4}$
MERCURY Meteor 600 and Monterey (390 cu. in.)	120	61	60	V81	4.05x3.78	52.5	300@4600	427@2800	390	9.6-1	5	20	20	19.5	$\frac{1}{2}$	+ $\frac{1}{4}$ to +1	$\frac{1}{8}$ to $\frac{1}{4}$
OLDSMOBILE F88	112	56	56	V81	3.5x2.8	39.2	155@4800	210@3200	215	8.75-1	4	12	16	11	— $\frac{1}{2}$ to — $\frac{1}{2}$	0 to + $\frac{1}{4}$	$\frac{1}{8}$
OLDSMOBILE 88	123	61	61	V81	4.125x3.687	54	250@4400	405@2400	394	8.75-1	4	11	20	19 $\frac{1}{4}$	0 to —1	— $\frac{1}{4}$ to + $\frac{1}{4}$	0 to $\frac{1}{8}$
OLDSMOBILE Super 88	123	61	61	V81	4.125x3.687	54	325@4600	435@2800	394	10-1	4	11	20	19 $\frac{1}{4}$	0 to —1	— $\frac{1}{4}$ to + $\frac{1}{4}$	0 to $\frac{1}{8}$
OLDSMOBILE 98	126	61	61	V81	4.125x3.687	54	325@4600	435@2800	394	10-1	4	11	20	19 $\frac{1}{4}$	0 to —1	— $\frac{1}{4}$ to + $\frac{1}{4}$	0 to $\frac{1}{8}$
PLYMOUTH 6 Savoy, Belvedere and Fury	118	60.9	59.6	61	3.4x4.125	27.7	145@4000	215@2800	225	8.2-1	4	15	20	13	C	B	$\frac{1}{8}$
PLYMOUTH 8 Savoy, Belvedere and Fury	118	60.9	59.6	V81	3.91x3.31	48.9	230@4400	340@2400	318	9-1	5	20	20	20	C	B	$\frac{1}{8}$
PLYMOUTH Super Fury 8	118	60.9	59.6	V81	3.91x3.31	48.9	260@4400	345@2800	318	9-1	5	19	20	20	C	B	$\frac{1}{8}$
PLYMOUTH Valiant	106.5	56	55.5	61	3.4x3.125	27.7	101@4400	155@2400	170	8.2-1	4	15	13	11	C	B	$\frac{1}{8}$
PONTIAC Catalina and Ventura	119	62.5	62.5	V81	4.06x3.75	52.8	215@3600	300@2000	389	8.6-1	4	12	25	18 $\frac{1}{2}$	—1 $\frac{1}{2}$ to $\frac{1}{2}$	+ $\frac{1}{4}$ to $\frac{1}{2}$	0 to $\frac{1}{8}$
PONTIAC Star Chief and Bonneville	123	62.5	62.5	V81	4.06x3.75	52.8	235@3600	402@2000	389	8.6-1	4	18	25	18 $\frac{1}{2}$	—1 $\frac{1}{2}$ to $\frac{1}{2}$	+ $\frac{1}{4}$ to $\frac{1}{2}$	0 to $\frac{1}{8}$
PONTIAC Tempest 4	112	56.8	56.8	41	4.0x3.75	26.4	109@3800	190@2000	194.5	8.6-1	4	15.5	11.6	—1.40' to + $\frac{1}{2}$	+0.8' to + $\frac{1}{2}$	0 to $\frac{1}{8}$	
PONTIAC Tempest 8	112	56.8	56.8	V81	3.5x2.8	39.2	155@4600	220@2400	215	8.8-1	4	4	15.5	11.6	—1.40' to + $\frac{1}{2}$	+0.8' to + $\frac{1}{2}$	0 to $\frac{1}{8}$
RAMBLER American—De Luxe and Super	100	54.62	55	6L	3.125x4.25	23.44	90@3800	160@1600	195.6	8-1	4	20	20	11	D	0 Prf.	$\frac{1}{8}$ to $\frac{1}{8}$
RAMBLER American Custom	100	54.62	55	61	3.125x4.25	23.44	125@4200	180@1600	195.6	8.7-1	4	20	20	10	D	0 Prf.	$\frac{1}{8}$ to $\frac{1}{8}$
RAMBLER 6	108	57.75	58	61	3.125x4.25	23.44	127@4200	180@1600	195.6	8.7-1	4	20	20	9 $\frac{1}{2}$	E	0 Prf.	$\frac{1}{8}$ to $\frac{1}{8}$
RAMBLER 8	108	58.75	59.12	V81	3.5x3.25	39.2	200@4000	245@2500	250	8.7-1	4	20	20	19	E	0 Prf.	$\frac{1}{8}$ to $\frac{1}{8}$
RAMBLER Ambassador	117	57.75	59.12	V81	4x3.25	51.2	250@4700	340@2600	327	8.7-1	4	22	20	18	E	0 Prf.	$\frac{1}{8}$ to $\frac{1}{8}$
STUDEBAKER Lark 6	108.5	57.37	56.56	61	3x4	21.6	112@4500	154@2000	169.6	8.5-1	5	18	18	11	$\frac{1}{4}$ 0 Prf.	0 to +1	$\frac{1}{8}$ to $\frac{1}{8}$
STUDEBAKER Lark 8	108.5	57.37	56.56	V81	3.56x3.25	40.6	180@4500	260@2800	259.2	8.8-1	5	18	18	17	$\frac{1}{4}$ 0 Prf.	0 to +1	$\frac{1}{8}$ to $\frac{1}{8}$
STUDEBAKER Hawk Coupe	120.5	57.37	56.56	V81	3.56x3.62	40.6	210@4500	300@2800	289	8.8-1	5	18	18	17	— $\frac{1}{2}$ to — $\frac{1}{2}$	0 to + $\frac{1}{2}$	$\frac{1}{8}$ to $\frac{1}{8}$

ABBREVIATIONS

A—Horizontally opposed.
B—Left + $\frac{1}{2}$, right + $\frac{1}{2}$.
C—Power steering + $\frac{1}{2}$ to $\frac{1}{2}$.
Manual + $\frac{1}{2}$.

D—Manual steering + $\frac{1}{2}$ Prf.
Power steering +2 Prf.
E—Manual steering + $\frac{1}{2}$ Prf.
Power steering +1 Prf.
F—Left + $\frac{1}{2}$ to $\frac{1}{2}$, right + $\frac{1}{2}$ to — $\frac{1}{2}$.

I—Valve-in-head
L—L-head.
Prf.—Preferred.

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the showroom!"**

says **B. H. BROTHERTON**, General Manager,
Schilling Motors, Inc., Lincoln-Mercury,
Memphis, Tennessee

"Fast, efficient service after the deal has been phoned in and understanding treatment of our customers are the two big reasons why we are sold on the **COMMERCIAL CREDIT PLAN**. The co-operation of their local office helps us close deals while the customer is still in the showroom. And if, for some reason, the customer runs into financial difficulties later on, Commercial Credit does everything to work out his problem with him, without repossessing the car. To promote our time sales, we offer bonuses and other inducements to salesmen who close deals that include our house plan."

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1961 PASSENGER-CAR SPECIFICATIONS

(Souped-Up Specs on Standard Models Are Not Listed)

MAKE AND MODEL	ELECTRICAL TUNE-UP								Bat.	FUEL SYSTEM			VALVES		
	Breaker Gap (.0)	Cam Angle (Degrees)	Contact Arm Spring Tension (Ozs.)	Ignition Timing (Degrees)	Timing Mark Location	Spark Plug Gap (.0)	Spark Advance (Max. Centrif. (Degrees)	Spark Advance (Max. Vac. (Degrees)		Cap. & Ter. Gro.	Carb. Mgr.	Fuel Pressure (Lbs.)	Tapet Clearance Intake (.0)	Tapet Clearance Exhaust (.0)	Intake Valve Stem b or side (Degrees)
BUICK Special...	13-19	30±1	19-23	7.5@1050rpm	VD	30-35	17@2100	17.5@16*	40N	RP	4½-5¼	Au	Au	29bte	
BUICK Le Sabre	13-19	30±1	19-23	12@400	VD	30-35	22@3800	17.5@18*	70N	RP-St	5-6¼	Au	Au	31bte	
BUICK Invicta and Electra	13-19	30±1	19-23	12@400	VD	30-35	22@3800	17.5@18*	70N	RP-Ca	5-6¼	Au	Au	33bte	
CADILLAC (All Models)	16	28-32	19-23	5@480	VD	35	9@2000	12@20*	70N	RP-Ca	5¼-6½	Au	Au	39bte	
CHEVROLET 6	19	28-35	19-23	5bte	FW	33-38	10@1400	22@15.5*	53N	RP	3½-4½	Aut	Aut	16bte	
CHEVROLET V-8 (283 cu. in.)	19	26-33	19-23	4bte	VD	33-38	28@3750	15@15.5*	53N	RP-Ca	5¼-6½	Aut	Aut	16bte	
CHEVROLET V-8 (348 cu. in.)	19	26-33	19-23	8bte	VD	33-38	24@4600	15@15.5*	61N	RP-Ca	5¼-6½	Aut	Aut	18½bte	
CHEVROLET Corvair	19	32-34	19-23	4bte	CsP	35	32@3600g	23@15.2b	35N	RP	5¼-6½	Aut	Aut	43bte	
CHEVROLET Corvette	19	26-33	19-23	4bte	VD	33-38	28@3700	15@15.5*	53N	Ca	5¼-6½	Aut	Aut	12½bte	
CHRYSLER Newport	14-19	27-32	17-21.5	10bte	VD	35	24@4100	22@15*	60N	St	4-5	Au	Au	13bte	
CHRYSLER Windsor	14-19	27-32	17-21.5	10bte	VD	35	24@4100	22@15*	60N	Ca	4-5	Au	Au	13bte	
CHRYSLER New Yorker and Imperial	14-19	27-32	17-21.5	10bte	VD	35	21@4600	22@15*	70N	Ca	4-5	Au	Au	13bte	
COMET (144.3 cu. in.)	24-26	35-38	17-20	C	CsP	32-36	F	28@5.35*	40N	Ho	4-5	16	16	15bte	
COMET (170 cu. in.)	24-26	35-38	17-20	10@500	CsP	32-36	F	19.8@3.3*	40N	Ho	4-5	16	16	15bte	
DE SOTO	14-19	27-32	17-21.5	10bte	CsP	35	24@4100	26@16*	60N	St	4-5	Au	Au	18bte	
DODGE Lancer	17-23	40-45	17-21.5	2.5bte	CsP	35	27@3850	25@14.5*	50N	Ca	4-5	10	20	8bte	
DODGE Dart 6	17-23	40-45	17-21.5	2.5bte	CsP	35	25@4400	20.6@12*	50N	Ca	4-5	10	20	8bte	
DODGE Dart 8	14-19	27-32	17-21.5	5bte	CsP	35	25@4600r	30@17*	50N	St	4-5	10	18	17bte	
DODGE Polara	14-19	27-32	17-21.5	10bte	CsP	35	24@4100	26@16*	60N	St	4-5	Au	Au	15bte	
FORD Fairlane 6	24-28	35-38	17-20	10@500	VD	32-36	F	26@8.3*h	55N	Ho	4-5	19	19	23bte	
FORD Fairlane 500 8 and Galaxie (292 cu. in.)	14-16	26-28½	17-20	10@500	VD	32-36	23@4000	25@19*h	55N	Ford	4½-5½	18	18	12bte	
FORD Fairlane 500 8 and Galaxie (352 cu. in.)	14-16	26-28½	17-20	6@500	VD	32-36	23@4000	25@16*h	65N	Ford	4½-5½	Au	Au	22bte	
FORD Fairlane 500 8 and Galaxie (390 cu. in.)	14-16	26-28½	17-20	6@500	VD	32-36	23@4000	15@17*h	65N	Ford	4½-5½	Au	Au	26bte	
FORD Falcon (144.3 cu. in.)	24-26	35-38	17-20	C	CsP	32-36	F	28@5.35*h	40N	Ho	4-5	16	16	15bte	
FORD Falcon (170 cu. in.)	24-26	35-38	17-20	4bte	CsP	32-36	0@0*	24½@3*h	40N	Ho	4-5	16	16	15bte	
FORD Thunderbird	14-16	26-28½	17-20	6@500	VD	32-36	23@4000	15@17*	65N	Ford	4½-5½	Au	Au	26bte	
LINCOLN Continental	15	26-28½	17-20	6bte	VD	34	30@4000	22@18*	80N	Ca	5-6	Au	Au	22bte	
MERCURY Meteor 600	24-28	35-38	17-20	10@500	VD	32-36	F	26@8.3*	55N	Ho	4-5	19	19	23bte	
MERCURY Meteor 800 and Monterey (292 cu. in.)	14-16	26-28½	17-20	10@500	VD	32-36	23@4000	25@19*	55N	Ford	4½-5½	18	18	12bte	
MERCURY (352 cu. in.)	14-16	26-28½	17-20	6@500	VD	32-36	26@4000	25@16*	65N	Ford	4½-5½	Au	Au	22bte	
MERCURY (390 cu. in.)	14-16	26-28½	17-20	6@500	VD	32-36	23@4000	15@17*	65N	Ford	4½-5½	Au	Au	26bte	
OLDSMOBILE F85	13-18	28-32	19-23	5bte	CsP	40	26@4200	25@16*	40N	RP	4-5¼	Au	Au	22bte	
OLDSMOBILE Dynamic 88	16	28-32	19-23	5bte	VD	30	26@4400	23½@21*	60N	RP	5-6	Au	Au	14bte	
OLDSMOBILE Super 88 and 98	16	28-32	19-23	5bte	VD	30	26@4400	23½@21*	70N	RP	5-6	Au	Au	11bte	
PLYMOUTH 6 Savoy, Belvedere and Fury	17-23	40-45	17-21.5	25bte	CsP	35	25@4400	20.6@12*	50N	Ca	4-5	10	20	8bte	
PLYMOUTH 8 Savoy, Belvedere and Fury	14-19	27-32	17-21.5	5bte	CsP	35	20@4600	30@17*	50N	Ca St	4-5	10	18	17bte	
PLYMOUTH Super Fury	14-19	27-32	17-21.5	10bte	CsP	35	19@4400	23@13.2*	50N	Ca	4-5	10	18	13bte	
PLYMOUTH Valiant	17-23	40-45	17-21.5	2.5bte	CsP	35	26@3850	25@14.5*	50N	Ca	4-5	10	20	8bte	
PONTIAC Catalina and Ventura	16	30±2	19-23	6bte	CsP	33-38	22@3600	20@15*	K	RP	5¼-6½	Au	Au	14bte	
PONTIAC Star Chief and Bonneville	16	30±2	19-23	6bte	CsP	33-38	20@2850	20@17*	K	RP	5¼-6½	Au	Au	14bte	
PONTIAC Tempest 4	13-19	28-32	19-23	6bte	CsP	33-38	22@3750	20@15*	42N	RP	4-5¼	Au	Au	14bte	
PONTIAC Tempest 8	13-19	28-32	19-23	5bte	VD	30-34	28@3700	16@15.7*	42N	RP	4-5¼	Au	Au	29bte	
RAMBLER American De Luxe and Super	17-22	37-21	17-22	3bte	VD	33-37	14@4000	11@11*	40N	Ca	4-5¼	16	18	10bte	
RAMBLER American Custom	16	28-35	19-23	8bte	VD	33-37	22@4000	22@16.5*	45N	Ho	4-5¼	12	16	12½bte	
RAMBLER 6 De Luxe and Super	16	28-35	19-23	8bte	VD	33-37	22@4200	22@16.5*	45N	Ca-Ho	4-5¼	12	16	12½bte	
RAMBLER 8 De Luxe, Super and Custom	14-19	28-32	17-22	1deg	VD	33-37	36@3800	20@15*	50N	Ho	4-5¼	12	14	12½bte	
RAMBLER Ambassador	14-19	28-32	17-22	1deg	VD	33-37	36@3800	20@15*	60N	Ho	4-5¼	12	14	12½bte	
STUDEBAKER Lark 6	17-22	37-41	17-22	2bte	VD	33-38	26@1800	16@13*	50N	Ca	3½-5¼	J	L	15bte	
STUDEBAKER Lark 8 and Hawk Coupe	16	28-32	19-23	4bte	VD	33-38	26@2200	18@13*	50N	St	3½-5¼	J	L	11bte	

a—Powerglide 20@3600.
Super Turbo 24@4300.
Au—Automatic transmission.
Aut—Automatic.
Super Turbo 23@15.2*.
b—Powerglide 23@16.2*.
bte—Before top center.
C—2"bte manual, 6"bte automatic.
c—Super Turbo air 54bte.

Ca—Carter.
CsP—Crankshaft pulley.
d—Manual trans. 5bte.
Auto. trans. 10bte.
e—Manual trans. 5bte.
Auto. trans. 10bte.
F—Non centrifugal.
f—Auto. trans. 30°.
FW—Flywheel.
g—Auto. trans. 5bte.

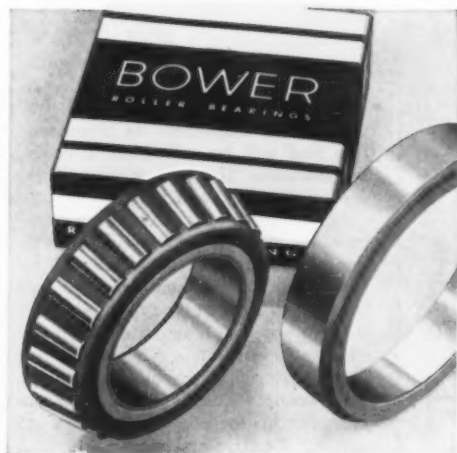
h—Automatic transmission.
Ho—Holley.
J—23-25.
K—50 or 60N.
L—25-27.
N—Negative.
RP—Rochester Products.
St—Stromberg.
VD—Vibration damper.
x—Auto. trans. 20@4600.

ABBREVIATIONS

Better products, *faster*, from your Bower bearing jobber:



Put wheel bearings on your "check-point" list ...always replace with Bower Spher-O-Honed!



Make it a rule to use the finest . . . protect your service reputation with Bower tapered or straight roller bearings

Wheel bearing "check-ups" are vitally important services from the standpoint of customer safety. For automotive servicemen, they develop into profitable business as well.

Bower Spher-O-Honed tapered roller bearings . . . the finest in the industry . . . are specially honed to super-finish raceway surfaces. This minimizes friction and eliminates "break-in" periods.

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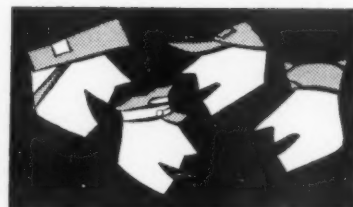
SHOP TALK

CARS FOR 2,000 A.D.

When Wilson F. Yarborough of Yarborough Motor Co., Fayetteville, N.C., was asked, along with others, to make predictions for the year 2,000 to be sealed in a special place in the new building of the Scottish Bank of Fayetteville until opened

in 39 years, he chose the automobile as his subject, forecasting:

"By the year 2,000 I predict that we will have only three types of automobiles. First, a small airplane type which will operate on a highway or will fly along several feet in the air. Second, a medium-size car which will run on our sec-



A column of informal comments about the automotive trade and its problems.



"750" Jenny's® INSTANT STEAM starts removing grease and grime AT ONCE!

Turn on the electric switch . . . and automatically, instantly the "750" Jenny's electrically ignited burner has hot cleaning solution in the hose . . . ready to thoroughly steam-clean the grime, dirtiest jobs in minutes.

The "750" Jenny is especially built for automotive use by the world originators of steam cleaners. It delivers at least 80 gallons of hot cleaning solution per hour at all operating pressures. It's easy to operate; has metered fuel and solution controls for operating economy and efficiency; is priced as low as \$498.00 f.o.b. factory. And, to start earning extra profits the very first day, you can buy Jenny on time from your nearby Authorized Jenny Distributor. He offers factory standard service; and carries Jennys, Compounds, and parts in stock to meet your immediate needs.



Mail this coupon now for details. See how the "750" Jenny's INSTANT STEAM can give you a head start on any cleaning job . . . on profits, too.



Homestead Valve Manufacturing Co.
Hypressure Jenny Division
P.O. Box 108, Coraopolis, Pennsylvania
Please send me full information on the "750" Jenny, and the profit story on Jenolizing.

Name.....Title.....

Company.....

Address.....

City.....Zone.....State.....



HOMESTEAD VALVE MANUFACTURING COMPANY
Hypressure Jenny Division—Coraopolis, Pa. (In Canada: Hypressure Jenny Sales & Service, Ltd., 517 Jarvis St., Toronto 5, Ont. C.S.A. Approved)

ondary roads, then a large luxury-type car with lots of room, equipped with reclining seats which will make into beds, TV and bathroom facilities.

"This type of automobile will be driven from the home onto a super-highway where it will then be taken over and operated by an electronic eye or beam which will be controlled by stations placed at certain points, thus giving the passengers freedom to sightsee or sleep in safety without the worry of manual driving. Telephones will be as common in cars then as they are in homes today.

"Motors will be small and simple. Fuel will be bought in bottles similar to vitamin pills and will be fed through a dispenser as required; this fuel will be sold from a vending machine. The largest part of the cost of this fuel will be tax.

"The largest percentage of automobiles will be owned by large firms and leased to individuals by the day, month or trip and one will be able to select any type and drive it to any point, leaving it and picking up another one for the return trip. There will be special models for vacation traveling with built-in camping facilities and designed to do any work job needed.

"There will be fewer color combinations and painting will be eliminated as all colors will be built in the material from which they are made; damaged spots will be re-

Address any comments to: Southern Automotive Journal, 806 Peachtree St., N.E., Atlanta 8, Ga.

You're Sure of a **PERFECT FIT**



**with a Holley
PEP® Carburetor
—Brand New,
Not a Rebuilt!**

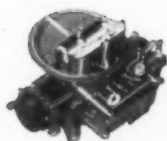
There's no question about the "tailoring" when you sell a Holley PEP Carburetor. Each PEP Carburetor is *brand new* and made-to-measure for the car and its engine, built with the same care and precision as the *original equipment* carburetor it replaces. Yet you sell these brand new Holley PEP Carburetors at *prices competitive with rebuilds* . . . and models are available for Ford-built cars and the most popular American Motors cars. See your Holley Distributor today about stocking Holley PEP Carburetors . . . and PEP Kits containing genuine Holley parts for carburetor minor overhauls.

®REGISTERED TRADEMARK

ORIGINAL EQUIPMENT MANUFACTURERS OF CARBURETION
AND IGNITION EQUIPMENT FOR OVER 55 YEARS

HOLLEY
Carburetor Co.

RT-42



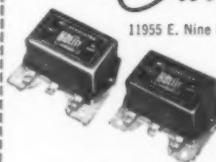
PEP Carburetors—
Engineered to Original
Equipment Specifications



PEP Carburetor Kits
—Original Equipment
Parts for Minor Overhaul



Genuine Holley
Ignition Equipment



Genuine Holley
Voltage Regulators



Genuine Holley Generator
and Starter Parts

11955 E. Nine Mile Road, Warren, Michigan

SEE YOUR HOLLEY DISTRIBUTOR—CHECK THE YELLOW PAGES

paired with a paste of the same material.

"If the Republicans are still in power, we will be back to the Hoover Carts and all of this prediction will be void."

FIRST CAR WHEN?

The first gasoline automobile produced in this country saw the light of day in 1891, according to a claim reported in the *Antique Automobile*, a publication of the Antique Auto-

mobile Club of America, the country's oldest and largest automobile historical society.

An Ohioan, John William Lambert, built the car in the latter part of 1890 and in 1891 was driving it on the main street of Ohio City, a year before the Duryea brothers built their first successful automobile. Lambert had brochures advertising his car in the mail in February of 1891, according to *Antique Automobile's* editor, L. Scott Bailey.

The inventor's claim for building America's first car was never

pressed, according to Bailey, because he had given up that right to a friend, Elwood Haynes, so that Haynes could claim through nationwide advertising that his car was the country's first.

HE LETS LIGHT SHINE

One service manager through 15 years of service at the same dealership has gained the respect of his employers, as well as all his customers, even to having that recognition make its way to the editorial page of his city's newspaper.

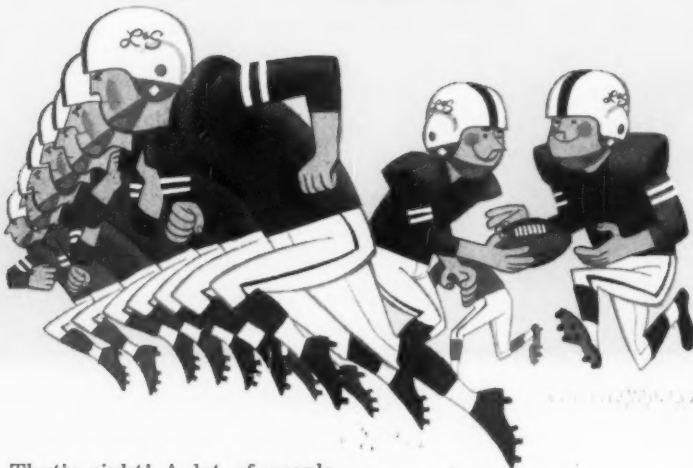
This item appeared in a recent edition of *The Greenville Piedmont* in South Carolina:

Mr. Jab Wilson
Service Manager
Sitton Buick Co.
Dear Mr. Wilson:

I have chosen you as the representative of service managers everywhere—of your caliber—to express appreciation for what you do for car owners. You and your men work overtime to keep our cars on the road, you advise us well as to needed repairs and avoid unneeded ones, and you instill a sense of confidence in us for the firms for which you work. For that, I thank you all.

COLONEL PIEDMONT

THE STAR OF OUR TEAM IS YOU !



That's right! A lot of people make up the L & S team . . . designers, engineers, production workers management, sales personnel and many others. But the star is **you** . . . the progressive businessman who confidently stocks and sells L & S Bearings, the **QUALITY** line . . . the **COMPLETE** line!

**L&S
BEARING**



L&S BEARINGS

L & S BEARING CO. P. O. BOX 995 OKLAHOMA CITY, OKLAHOMA

KIRKSVILLE ON THE MAP

Kirksville, Mo., home of J. Burdman Auto Parts, Inc., began Oct. 30 to be served by Ozark Air Lines and is "one of the smallest towns in the country to have scheduled air service," according to Bernard Burdman, secretary-treasurer of the parts firm.

The president of the company, Joe Burdman, is mayor of Kirksville, having been elected last April.

TOO WET TO SELL

Ships bringing new Renault cars to this country are carrying back to France some 3,000 cars that suffered water damage at Port Newark during Hurricane Donna Sept. 12.

The cars, owned by Renault distributors and stored outside the area operated by the Port of New York Authority, were ready for distribution to Renault dealers in the Middle Atlantic states and the Midwest when the hurricane struck. Torrential rains and record tides six feet above normal, driven by winds of up to 90mph, hit the area where the cars were parked.

TWO FOR TOUGH COOLING SYSTEM JOBS

WARNER BLOCK REPAIR—HEAVY DUTY SEALER

- Here is a liquid compound especially designed to seal leaks in all pressurized cooling systems.
- Can be installed directly into radiator—no need to disconnect hoses for installation in block.
- Mixes with anti-freeze—no need to drain first.
- Works fast and effectively to repair all leaks and gasket seepage in cars, trucks, tractors and all other water cooled internal combustion engines.
- Suggested retail price—\$1.50.

WARNER HEAVY DUTY COOLING SYSTEM CLEANER (DRY)

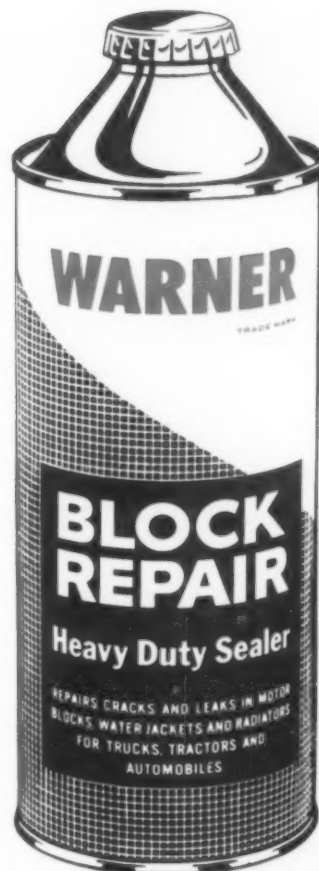
- Powerful cleaner compounded for all automotive cooling systems, especially those that get hard usage or are neglected.
- Dissolves grease and oil—disperses rust, scale and other foreign matter.
- NON-ACID—requires no neutralizer.
- Safe to use—will not harm skin, rubber, body finish or any metals in the cooling system.
- Unconditionally guaranteed.
- Suggested retail price— \$1.50.

TODAY'S MODERN ANTI-FREEZE REQUIRES AN ABSOLUTELY CLEAN COOLING SYSTEM!
GET YOUR SHARE OF THIS PROFITABLE COOLING SYSTEM SERVICE MARKET!

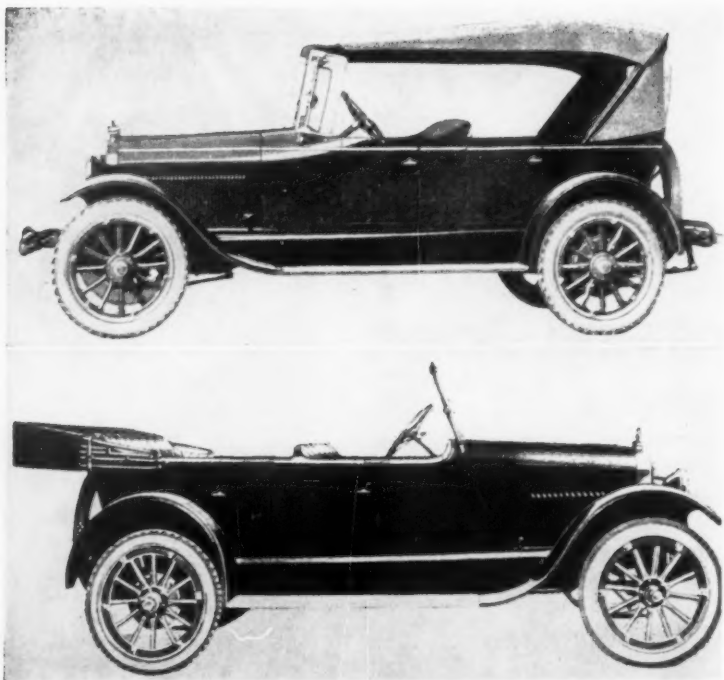
By the makers of famous Warner Liquid Solder (non-metallic, deposits tiny fibers to repair leaks) \$1.00 . . . Warner Protector and Water Pump Lubricant \$1.00 . . . Warner Speed Flush \$1.00 . . . (suggested retail prices).

safe to use
with all
aluminum
engine parts

Nationally Advertised in **LIFE** and **POST**



WARNER-PATTERSON COMPANY 600 S. Michigan, Chicago 5 • Toronto 2, Canada



These old-timers are presented to remind you of how the South once hoped to become what Detroit achieved later. Do you recognize them? They're published here to remind you that next month's issue will take you back over the years to the muddy, rutted roads of 1921 when this publication first smelled printer's ink. Oh! What are these cars? The top is the Hanson of 1927, a seven-passenger phaeton with 27hp engine and which was produced at Atlanta. The bottom photo shows the 1923 Piedmont, offered with a choice of two engines but only one color—green. Made at Lynchburg, Va., it survived six years after its introduction in 1917.

Incentive Lifted Sales

(Continued from page 31)

shield will be scraped with a defective blade. Wiper blades are now selling at the rate of 40 pairs a month.

Tires gained 50%. First thing a salesman looks for now as a car rolls in is tire wear. On the lubrication rack, when a car comes in for any service or repair, all four tires are closely examined by sight and touch.

Brake volume has gone up 25% with incentives. Mileage is now carefully checked, brake pedals observed as the car is jockeyed around and every opportunity used to pull a wheel when a brake adjustment has been requested. Taking the time to pull a wheel pays off because there is usually a wheel bearing repack that can be sold.

Battery volume went up from 30 in March '59 to 55 in March '60. While the weather is a factor in battery sales, it is incentive salesmanship that is doing a better job, according to Mitchell.

Lake Amoco's top salesman earns an extra \$60 a month through the

incentive plan. Second runners-up are salesmen who earn \$57, \$55 and \$52 monthly in commissions, and one whose earnings hover around \$30 to \$32. Mitchell holds no special pep meetings or training periods, nor does he chart any figures of daily sales per man for display. He is at the elbow of salesmen from time to time during the day, reminding them of sales to be made and earnings that are there for the effort.

Mitchell cited examples of the kind of sales that can be made when salesmen take the trouble to inspect a car closely. A car was brought in for a lubrication. On the lift it was apparent that a rusted and broken muffler would have to be replaced. Further inspection brought out need for a carburetor cleaning and replacement of a part. The customer's bill came to \$20.

Mitchell read from another repair order of the previous day. Another customer had brought his car in for a lubrication. In driving the car onto the grease rack, a "miss" was noticed and spark plugs and condenser written out on the order after investigation. Pulling a wheel to learn if brake lining was gone, the shop ad-

vised the customer to have a front wheel bearing repack though brake lining was not needed. The sale came to \$17.84.

When service salesmen sell a part or service, they enter date, name of part, price, car on which it was installed and their initials. Daily balances with repair orders are made by Mitchell. In a separate account under the salesman's name sales are credited to him.

"We are now carrying a heavier stock in TBA, mainly in the larger items, than we did six months ago. It's a cost stock of \$14,000. Our inventory, like everybody else's, has gone up yearly by about ten per cent," added Mitchell.

The only promotion done by Lake Amoco is in the AAA magazine about three or four times a year. This is usually on spring and fall changeovers, or specials offering a \$25 job for \$16.95 to AAA members. Volume is boosted by about 25 to 30 jobs over normal business a month during the two-month special.

Cummins Engine Will Expand

Construction has begun on a \$1,700,000 addition to manufacturing facilities of Cummins Engine Co., Inc., Columbus, Ind., with completion scheduled for August 1961. The new building, which will house all engine assembly functions, will provide 101,600 square feet of additional floor space and increase total building area to 1,000,000 square feet.

A commercial financing district office opened recently in Jackson, Miss., by Associates Investment Co. is headed by J. H. Keen (shown here), district manager, with six permanent employees. First of its type to be opened by the company, the operation will service Mississippi, Alabama, Georgia, Louisiana, Arkansas and Tennessee in processing all commercial time sales transactions initiated by branch offices in those states.



sell better because they offer so much more to sell...



Certified

POWER MOWERS AND LAWN EQUIPMENT

- Two-speed transmission
- Hinged-tip deflector blade with 100% crankshaft guarantee
- New wind-up starter
- Safety starter release on handle
- Fingertip choke-o-matic throttle
- Fingertip clutch
- Complete enclosed front wheel drive
- Reinforced heavy duty armor plate steel frame
- Beautiful two-tone "weatherproof" baked enamel finish
- and many more outstanding features!

You've never carried mowers that sell as easily as the 1961 Certified line. That's because more and more of your customers are becoming quality-mower-conscious. And Certified is the only quality mower line with so many selling features... like the exclusive Certified Hinged-Tip Deflector Blade and exclusive Safety Handle Starter Release. There's a Certified Power Mower for every one of your customers. Simply let them try a Certified... and they'll buy a Certified... the quality mower with all the sales advantages.

Model 2227
22" SELF-PROPELLED
DELUXE ROTARY...

Contact your Certified jobber or mail coupon below for full details of the famous CertiFIVE Profit Plan!

WESTERN TOOL AND STAMPING COMPANY
2725 Second Ave. • Des Moines 13, Iowa
Dept. SAC-3

Name

Firm Name

Address

City Zone State

"Dri-Seal" increased my ignition set sales 700%! Customers really go for this red transparent wire and the yellow plastic boots. . . it looks great on the engine . . . I go for "Dri-Seal" because of the handy packaging and the free self-service display rack. . . and the 12-set assortment is all I need. Most of all, I like those extra sales my Crescent "Wiry Joe" distributor sent my way



Crescent Wiry Joe . . . the complete line of wire and cable

- Battery Cables and Straps • Ignition Wire & Cable
- Spooled Wire & Cable • Battery Hold Downs
- Trouble Lights • Terminals & Accessories
- Industrial Wire & Cable



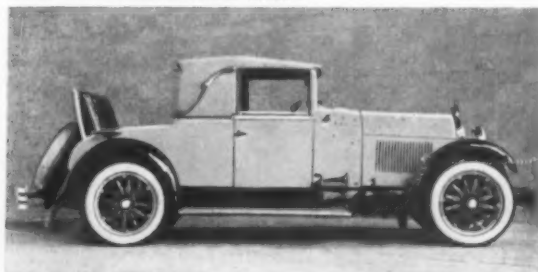


Any two-tone job
turns out better with
SCOTCH BRAND Masking Tape



"SCOTCH" BRAND Masking Tape is the surest, fastest way to turn out top-notch two-tone or overall paint jobs . . . whether for the exacting restoration of an antique, or refinishing to meet the demands of today's top-quality appearances. It goes on easier . . . sticks at a touch. Excellent adhesion prevents paint from creeping under, gives a clean, sharp separation. And "Scotch" BRAND Masking Tape strips off clean . . . leaves no jagged edge . . . no messy adhesive residue. Order from your jobber today.

CAN YOU NAME THIS CAR?



1927 KISSEL Coupe Roadster (8-cylinder) restored in authentic two-tone original trim by Mr. Robert L. Hawkenson, Richfield, Minn.

3M Products give you the right start for a quality finish!
3M Automotive Products

"SCOTCH" IS A REGISTERED TRADEMARK OF THE 3M CO.
MINNESOTA MINING AND MANUFACTURING COMPANY
... WHERE RESEARCH IS THE KEY TO TOMORROW



Dear Bill,

Just got your letter; thanks, and a MERRY and a HAPPY to you, too. We're mighty busy, which is pretty much as usual for this time of year.

The early buyers of the new model are getting back in for the first checkup, and the Christmas new-car buyers are shopping, so we're busy answering questions, ironing out bugs and generally trying to familiarize ourselves with what to expect next on the new ones. The better we know 'em, the



start cooking...



LEE gives you this sizzling bonus gift in every "33" carton

Imagine! You get this giant 12" immersible THERM-O-WARE fry pan, with detachable "set-it-and-forget-it" cooking unit, packed in every LEE "33" Assortment. Your total cost is only \$47.96, the price of the assortment. The fry pan (comparable retail value \$28.40) is FREE. And remember, every dual-action LEE filter gives you an extra profit.

LEE FILTER CORPORATION, EDISON, N. J.
In Canada: 267 Niagara St., Toronto, Canada

You get these extra sales features as well: LEE oil filters neutralize acids as well as remove sludge; LEE in-line gas filters remove both dirt and water; LEE flame-proof air filters prevent underhood fires caused by carburetor backfire. Ask your jobber about this red-hot, extra-profit merchandiser today! Or write to us for details.



LEE FILTERS
put profits in your pocket

quicker we can fix 'em during the coming year.

Knowing the new car is so important that we sometimes forget that we have to know the new customer too, for he has to guide the car back to the shop so we can work on it. And there are plenty of things you have to know about your new customer if you are to sell him on coming back with his service work.

Some new-car buyers patronize a dealer just long enough to get a new car with a warranty, get the shakedown inspections and then take off until the next new-car purchase. We do everything we can to be friendly with this type, and never give up on the fact he might come back, for someday his cousin may sell his shop or station and he will again be a service prospect.

But a surprising number of new-car buyers are not previously committed. These people are looking for a friend in the service business and we try to show them that next to them, we are likely the most interested in the welfare of the car we sold them and stand to lose most if it is not satisfactory.

We've heard of wheelers and dealers who consider any service they have to supply a pain in the neck and this attitude cannot help but filter on down through their organization until the customer will feel it from his first contact with the service crew. Enough of their customers have come to us that we know they control an interesting service dollar, plus making a very good new-car prospect for their next purchase, so our friendliness is genuine. We have some little stake in the future, too, we hope.

Sometimes I think our customers' "friends" at their shop or office give us more trouble than our competitors in the service business. The "technical" information these friends supply on the matter of adjustments, lubrication, fuel and general operation is enough to make your hair stand on end. Fortunately, enough of

Now! Play it warm and cozy with ...



THIS BIG ELECTRIC BLANKET DEAL!

It's yours from Delco Battery and Packard Cable, and it's a beauty ... a CASCO Electric Blanket, the perfect gift for the lady of your house! This wonderful blanket, available in twin or double bed size, features contour design with thermostat control, and arrives just in time for cool weather comfort ... and the upswing in replacement battery and cable sales.

All you do is order six Delco batteries, three of which are DC-12's (or batteries of higher capacity), or a \$20.00 selection of any Packard Cable products, and you get this lightweight, high-quality electric blanket for only \$11.95! With each order you receive colorful Delco or Packard display material, too!

So whether you handle batteries, cables, or both, here's a fine opportunity to blanket your family with warmth and comfort. Your United Motors Service supplier is the man to see.

DELCO BATTERIES and PACKARD CABLE ... reliable products of GENERAL MOTORS ...
distributed nationally through



these customers come to us for verification before testing out these theories, products and suggestions so we can advise them on the proper supplies or adjustments before they louse up the unit for good.

It's amazing how old superstitions and out-and-out wrong guesses will survive down through the years, even though they are disproved time after time. Sometimes gullible servicemen are "taken in" and then give out with the same misinformation that was disproved many times in years past.

We always encourage our customers to discuss their service ideas with us so they won't be conned into lousing their vehicle by following screwball suggestions. We try to show them that this amateur free advice is worth just what they paid for it.

Yrs,
Ed.

Follow-Ups Bring Jobs

(Continued from page 37)

had not contacted the customers."

The classic example of an unrequited customer was a woman who bought a rather old-model used car and had trouble with it the first week she drove it. The company made good on the trouble, but it was not long before another service job—this one not covered by the warranty—became necessary. It ran into considerable money, and the follow-up telephone contact revealed that the customer was unhappy with the work.

At the service salesman's insistence, she brought the car back. Again, she was unhappy with the result.

This went on for five more adjustments. Finally, when she was asked to bring it in for still another adjustment, she sighed.

"Just let it go. I'm tired of bothering you," she said wearily. The salesman was a little tired, too. So they called that one a draw.

"But even at that, I don't think she would have the nerve to tell her friends that we did not treat her fairly," Pigg said.

When the salesman completes his call and writes the results of the call on the service ticket, the ticket then goes to the service manager's office, where a girl types the comments from each ticket on a special report sheet. Each comment is a separate entry on the sheet, with the name of the customer and the ticket number opposite each comment.

Pigg then gets the typed sheets and checks the reports as originally recorded and by the information contained he is able to see what progress, if any, is being made toward eliminating complaints and he also is able to see if complaints are from the work of one or two mechanics rather than spread over the entire shop force.

Recently, for example, he noticed that more than half the unfavorable comments compiled over a two-week period were from persons who were served by a new mechanic. Thus he was able to spot the source of a lot of complaints, and ultimately it was necessary to dispose of the mechanic's services.

GM Makes 80,000,000th

General Motors manufactured its 80 millionth vehicle somewhere in the world during Motorama Week in New York City last month. The corporation's first Cadillac was built in 1908. The second 40 million vehicles were produced in less than one-fourth of the time it took to build the first 40 million, a goal reached in 1950.

Winter's Untapped Treasure

for just six easy words!



Winterstats by AUTOSTAT®

Send customers off happier and skyrocket your profits with these six words: "—And a Winterstat for faster warm-ups!"

This powerful hi-temp Autostat battles the coldest weather . . . gives cars quicker warm-ups, smoother performance, better mileage!

Complete winterizing includes checking the thermostat . . . and Winterstat zooms your winter stat profits!

DO MORE WITH FOUR!

With Autostat Motor Thermostats you need only 4 models to cover all cars from 1957 on . . . and 95% of all cars back to 1950!

Robertshaw

Robertshaw-Fulton Controls Co.



FULTON SYLPHON
DIVISION

Knoxville 1, Tennessee



A complete tune-up manual
... pictures show you how!



Outside metal sign ...
certifies your shop!



Outside banner ... a
real sales-starter!



Continuing program
keeps you informed!

ONLY \$346¹⁵ FOR ALL THIS

... parts, testing equipment, step-by-step tune-up guide, merchandising—

ALL THIS gets you into major ignition service IMMEDIATELY!

Only \$346.15* sets up your shop to handle the 8 out of every 10 vehicles requiring ignition service!

The NIEHOFF MAJOR equips you with everything you need for major ignition tune-ups ... lets you earn as you learn. Contains point sets, condensers, rotors, distributor caps, brush sets, regulators, coils and switches—all in a sturdy merchandising cabinet.

Necessary service-proved testing equipment is included, too—Voltage Regulator Tester, Tachometer, Dwell Meter, Compression Gauge, Distributor Wrench, Point Gap Setter, Timing Light and Remote Control Switch.

Add the industry's simplest know-how and show-how guide—ABC OF MOTOR TUNE-UP. It's simple, basic ...

details tune-up procedures ... and it's packed with easy-to-follow pictures. NIEHOFF helps you sell your service with banners, posters, decals, signs, charts, manuals, catalogs, and bulletins.

Buy NIEHOFF today! Ask your jobber for details on NIEHOFF's exclusive parts and equipment assortments or write NIEHOFF today!

*Price subject to change without notice.

NIEHOFF

AUTOMOTIVE PRODUCTS

C. E. NIEHOFF & CO. • 4925 W. Lawrence Ave., Chicago 30, Ill. Branch: 1330 Olympic Blvd., Los Angeles 15, Calif.
Ignition parts for cars, trucks, tractors, industrial equipment, small engines, foreign cars • Ignition Testing Equipment • Hydraulic Brake Parts



To provide the sun and fresh-air advantages of a convertible, the Skytop Sunroof will be available immediately on all 1961 Lark sedan and hardtop models. The sliding weatherproof vinyl top covers a 36" by 28" aperture in the roof and slides back on chrome runners. This can be operated quite easily with one hand.

30% More Work

(Continued from page 30)

he was in a good humor, mad, complaining, cordial, or what not. This information is important in helping the company keep smooth public relations. His attitude is not only recorded by the service advisor when he comes in, but by the cashier when he settles his bill.

Another column shows whether the service is a kickback on a previous repair job; another column indicates if the complaint is against a factory defect or a Jim Reed difficulty; another column lists the time allowed for the job and one the time at which the car is promised back to customer.

Other columns show type of work to be done, whether polish, wash, mechanical, electrical and so on.

On the day that I checked on this system Jim Reed had ahead on reservation list 17 wash jobs, 35 lubrications, 18 front-ends and 11 trims. One-tenth of each day's shop business is now reserved ahead. By the end of this year Greer expects 30% of his service volume to be so reserved. He said that in practically 100% of all reservations the customer either shows up to have work done or to have it postponed if he finds he can't keep the appointment.

Greer pointed out that, like any other complete changeover in service operations, the management which puts it into effect must expect some difficulty at first as the service personnel gets used to it. Some of the men at first may not like it and complain but, according to the Jim Reed experience, they all like

the new methods better when they get adjusted to them and understand them well.

"Generally speaking," said Greer, "the service advisors and some of the other workers have more unoccupied time. They have more time to discuss each job with the car owner, resolve his complaints, if any, and draw his attention to other service needs not designated in his order."

Having more time to discuss new repair needs that have been disclosed by the shop is one thing that has helped increase the service volume. When new needs are disclosed, the advisor gets in touch with the owner by phone or in person, if he is waiting. He didn't have too much time to do this under the old system when so much of it was used up in frantic search for service orders listed hours before, or for a car somewhere in a full lot, or in other complications.

Each advisor now has a desk with his name and service record in large, distinguishable letters inscribed on the front. The four desks with these inscriptions face the service receiving room. The inscription on each desk shows, along with the advisor's name, the number of years he has been with Jim Reed, the number of years he has been a Chevrolet mechanic and other pertinent information.

These inscriptions, which the service customer can easily read, help to create confidence in the one being served.

Greer explained that while Jim Reed is one of the larger dealer plants, the reorganized system there

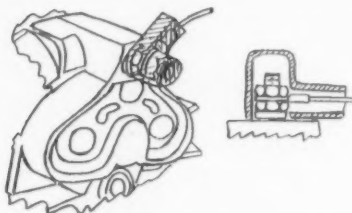
can be profitably used by smaller shops in which the personnel handles a lot of jobs in proportion to its size.

Protecting the Circuit On Dodge Alternator

DODGE Division has issued the following service bulletin:

To prevent accidental grounding of the alternator output stud, which may result in destruction of the wiring harness and alternator, a vinyl boot cover is being released.

The boot is attached to the alternator output wire and placed over the stud in the manner shown



in illustration. [At left you see the installation on E.E.D. alternator.]

Until such time the vinyl boot is available, all cars in stock should be protected by applying plastic electricians' tape to the alternator stud terminal. On those cars already delivered, it should be accomplished at the earliest opportunity.

Retired GM Executive Gets NASCAR Post

HARLEY J. Earl, former General Motors executive and veteran sportsman, has been appointed commissioner of the National Association for Stock Car Auto Racing, filling the vacancy left by the death of E. G. "Cannonball" Baker last May, Bill France, president of NASCAR, announced.

Formerly GM vice president in charge of the styling staff, Earl retired in 1959. He was appointed director of the art and color section of General Motors in 1927 and became a vice president in 1940. Earl was responsible for designing the original LaSalle and the redesigning of Cadillacs.

Two More Offer Speedostat

The Speedostat, the automobile speed-controlling device designed and produced by Perfect Circle Corp., has been selected as factory-installed optional equipment on the 1961 Chevrolet and Lincoln. The device continues to be a factory-installed option on Chrysler, Imperial and Cadillac for 1961.

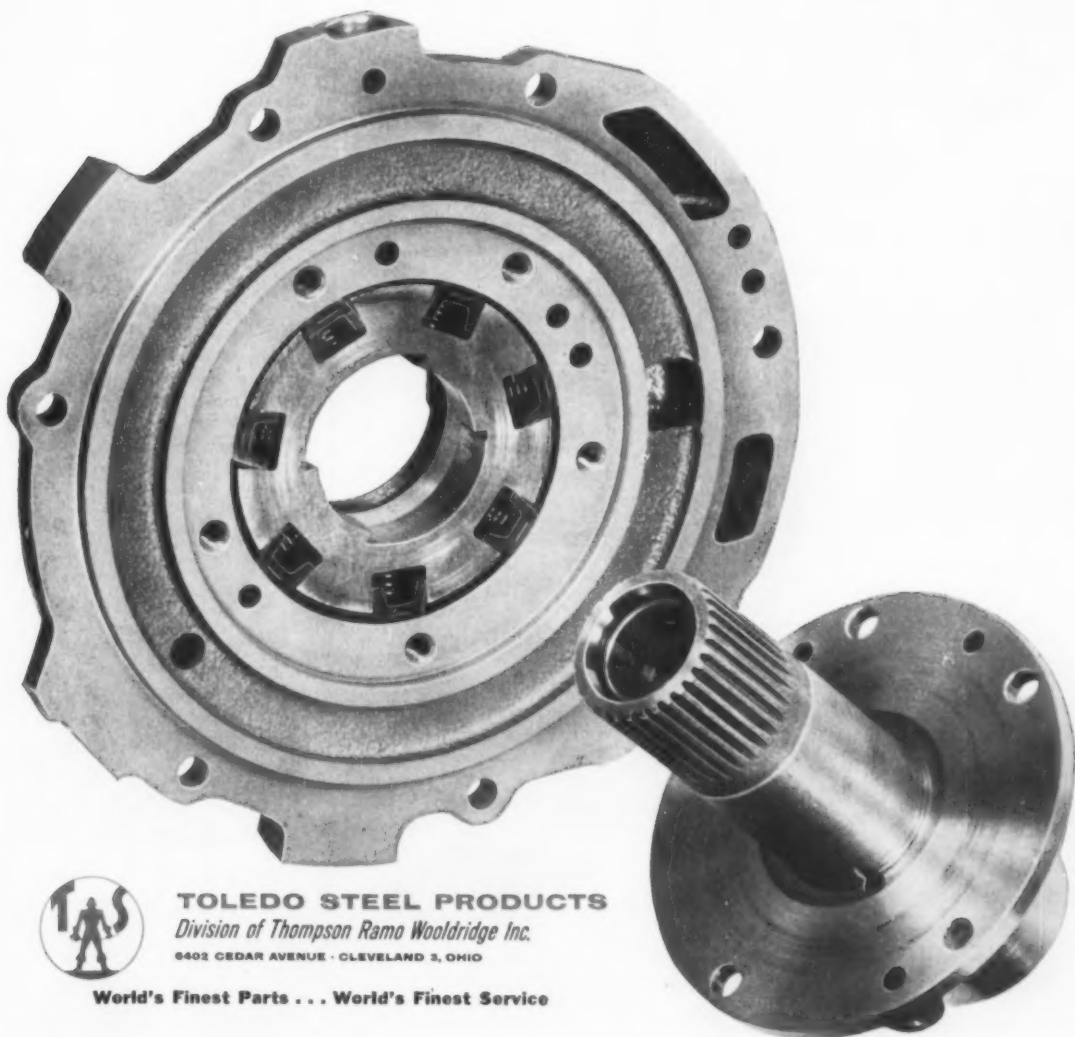
**your best complete line buy
for immediate availability
and quality performance**

**TOLEDO
STEEL**

AUTOMATIC TRANSMISSION PARTS

Exclusive slipper-type pump. This Toledo pump (see large illustration) for 2 and 3-speed transmissions is the only pump available which does not lose efficiency as its working parts wear. And Toledo's unique slipper design produces a non-pulsating discharge for quieter operation over a wide speed range.

Hard-to-get Torus Covers... we have them! Hard-to-find front unit Torus Covers for Hydra-Matic controlled coupling transmissions are in plentiful supply through Toledo Steel Products—one more example that demonstrates the benefits of making Toledo Steel Products your one-source supplier for automatic transmission parts.



TOLEDO STEEL PRODUCTS

Division of Thompson Ramo Wooldridge Inc.

6402 CEDAR AVENUE • CLEVELAND 3, OHIO

World's Finest Parts . . . World's Finest Service

Staging IGO Programs To Be Aired at Tulsa

A MEETING of local and state IGO executive directors Jan. 12 aimed at a better understanding of how to put into operation IGO programs will precede the mid-winter sessions of the directors of the Independent Garage Owners of America at Tulsa, Okla.

Executive Director Ralph H. James announced that the speakers would include Ira Saks of Cleveland, Ohio, well-known former parts

manufacturer now active with several industry associations; Henry S. Clark of Atlanta, executive director of the Georgia Automotive Wholesalers Association and a parts rebuilder who, like Saks, is a member of the IGOA advisory board, and Ray Segriff of Cedar Rapids, manager of the IGO of Iowa.

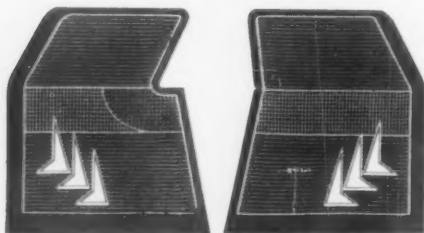
Harold Grindle of Toledo, manager of the IGO of Ohio, will explain the IGO membership drive program and James will explain the national record forms. A question-and-answer session will follow.



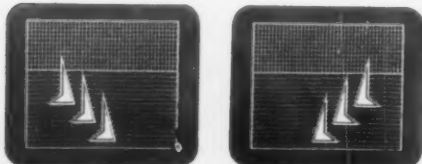
This sign, erected on U.S. 40 at St. Louis, Mo., was donated to the Independent Garage Owners of America by Moog Industries, Inc., and is a replica of the IGOA's "Highway Sign of Progress." From left to right are H. C. Moog, president of the firm; Art Kittell of Pittsburg, Kan., president, and Ralph H. James of Tulsa, Okla., executive director, of IGOA, and J. B. Bushyhead, executive vice president of Moog and long a supporter of the association.

MONKEY GRIP CAR and UTILITY MATS

NEW *Advanced Styling*
For All Modern Cars



TRIM-FIT TWIN MATS — The ultimate in style for modern car floor protection. Engineered in size and design to fit full size and compact car floors. Special heel rest area for comfort and safety. All new, highest quality live rubber — colors stay bright longer. 3-color boxes for attractive display.



The 100% utility mats, style-matched for TRIM-FIT TWINS companion set selling. Most attractive, modern style.

WRITE FOR COMPLETE CATALOG.

MONKEY GRIP SALES CO.

P. O. BOX 6170

DALLAS, TEXAS

*The complete line
of fast-selling
mats for all cars*



FULL-FIT (Front) — Door to door protection. Universal design for practically all cars — Individually boxed.



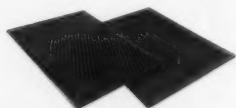
G-M 60 — Especially designed for '59 and '60 General Motors cars (except Cadillac and compact models).



FULL-FIT (Rear) — Over-the-hump protection for rear floors. Universal fit. Also, a utility mat.



FEATHER FLEX TWINS — Universal fitting mats for front floors — Rib-and-groove and diamond waffle surface designs.



UTILITY MATS — All-purpose mats for cars and all utility needs. Wide range of sizes.

This part of the program will be at the association's national offices in Tulsa.

Friday and Saturday's program, to be held at the Alvin-Plaza Hotel, will deal with committee meetings and reports. Mel Turner of Chicago, curriculum director of Automotive Service Industry Association and a garage owner himself, will address the Saturday luncheon. The board will dispose of unfinished business Saturday afternoon, leaving that evening free for the visitors to see Tulsa.

Gould Introduces Filter Line

A complete line of oil, air and fuel filter elements for automobile, diesel and tractor requirements will be marketed by Gould-National Batteries, Inc., St. Paul, Minn., under the Gould-National brand name. Introduction of the filters is the latest in a series of expansion moves by the firm.

Lakeland, Fla., Picks Rhodes

J. H. "Dusty" Rhodes of Jeep Motors, Inc., is the new president of the Lakeland (Fla.) Automobile Dealers Association. Other officers are Robert G. "Bobby" Waters of Lakeland Ford Co., vice president, and George J. Husek of M. P. Tomlinson Co., secretary-treasurer.

Perfection!

It All Adds Up to Profit for You!
Starting Better with Echlin Ignition
Stopping Safer with United Brake Parts



ECHLIN *Ignition*

UNITED *Brake Parts*

THE ECHLIN MANUFACTURING COMPANY • BRANFORD, CONN., U.S.A.

UNITED PARTS DIVISION • CHICAGO, ILL.

ECHLIN-UNITED OF CANADA, LTD., TORONTO

IGNITION & ELECTRICAL PARTS • HYDRAULIC & POWER BRAKE PARTS • BRAKE CABLES • BRAKE FLUID • SPEEDOMETER CABLES

Practical Gas Turbine Claimed by Chrysler

"We now have the gas turbine at a point where it is practical and competitive in every respect if we can only overcome the fear of something new."

That is what George J. Huebner, Jr., Chrysler Corp. executive engineer in charge of research, said concerning the company's development of a gas turbine, said to be equal or superior to the conventional automobile engine in every respect. The

company, however, doesn't expect its appearance in passenger cars until at least 1966, the delay being a matter of education.

"The gas turbine is still relatively new and people always fear what is new," Huebner said. "We are told the public would not accept gas turbines because it doesn't understand them."

Previous objections to the turbine—high fuel consumption and manufacturing costs—apparently have been overcome. The Chrysler turbine experimental cars, accord-

ing to Huebner, now deliver gasoline economy comparable with compacts powered by piston engines. Cost of manufacturing the turbine, too, could be less than the internal combustion engine, he said.

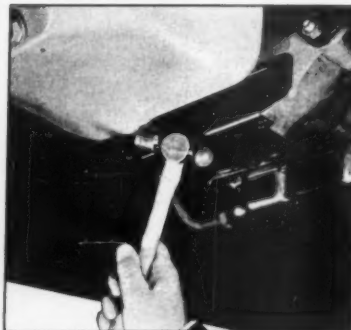
Advantages of the turbine are its lack of vibration, fewer parts, less maintenance and its ability to operate on a variety of fuels.

Eliminating the Whine In Some '61 Pontiacs

PONTIAC has issued this service bulletin:

Some early 1961 Pontiac cars may emit a whine which sounds similar to a generator bearing or transmission front bearing noise. This noise is most prominent at 800-900 engine r.p.m., particularly when the car is in park or neutral.

This whine is caused by close proximity of engine oil pump to oil pan and can be corrected by lightly striking oil pan at left side of dimple



as shown in illustration. This will relieve pan at right side of dimple and eliminate noise.

Arvin Appoints Bosart

Arvin Industries, Inc., of Columbus, Ind., has appointed Robert G. Bosart manager of advertising and sales promotion for its automotive and all other divisions. President E. H. Stonecipher announced. Before joining the company in 1959, Bosart was sales promotion manager for Oklahoma Tire and Supply's chain of 235 retail stores for four and a half years.

Carter Names Thompson

Charles L. Thompson has been appointed to the newly created position of director of marketing for Carter Carburetor Division of ACF Industries, Inc., General Manager Kennard F. Miller announced. Thompson will direct and coordinate the division's marketing activities, Miller said.

Lisle GLAZE BREAKERS

MODEL GBX (STONE TYPE)

Handles cylinders

from 2" to 7"

The only glaze breaker that is adjustable to control honing pressure in all size cylinders — offers light or heavy pressure in all bore diameters. Easy to insert and remove from cylinders. Easy to use — cuts the glaze quickly. Flexible shaft.

QUALITY
AT A LOW
PRICE



Made by Lisle
so you know
it's the Best!

**BOTH GLAZE
BREAKERS** operate with
any 1/4" to 5/8" electric drill.

MODEL GBI (PAD TYPE)

Handles Cylinders from 2.6" to 4 1/2"

Flexible pads remove the glaze in low spots and other irregularities without excessive grinding. Pads are absorbent — hold down abrasive dust when dipped in oil. Replacement abrasives are economical and easy to install. Actually can work on much larger sizes since it can be "walked" around the cylinder wall.

it's a Good tool...it's a

Lisle Corporation
Clarinda, Iowa



By the Manufacturers of
Jeepers Creepers,
Hydraulic Brake Parts,
Brake Cable Assemblies,
and Original Equipment
Components for the Aircraft
and Automotive Industries

HIRSIG-BRANTLEY
Service Means
Complete Service
in the South



for Manufacturers and Jobbers!

★ **IT'S EASY** to understand why Hirsig-Brantley Service means complete service for manufacturers and jobbers in the South. A quick look at the Hirsig-Brantley organization is all that is necessary. . . .

AUTOMOTIVE EXPERIENCE . . . Hirsig-Brantley Service is complete because of the many years of automobile experience behind this organization . . . an average of over 13 years per man! These years of experience bring know-how to the creation and maintenance of the kind of service that builds business.

SMALL TERRITORIES. . . Hirsig-Brantley men have small territories so they can make more frequent calls on their customers and serve them better. From headquarters in 13 Southern cities, information brought to customers on Hirsig-Brantley lines is timely and complete.

CAREFUL PLANNING . . . The work of the Hirsig-Brantley men in the field is planned and directed from Headquarters by men with long and successful experience in the automotive field. A fully staffed home office promptly handles the necessary details as required by an efficient sales organization.



Lawrence M. Hirsig



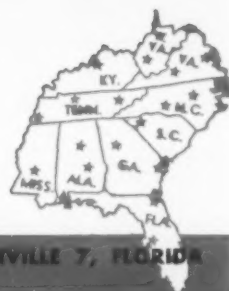
Mrs. Lawrence M. Hirsig



B. T. Brantley



B. W. (Larry) Hirsig



HIRSIG-BRANTLEY COMPANY, AMERICAN NATIONAL BANK BLDG., JACKSONVILLE 7, FLORIDA
MANUFACTURERS DIRECT REPRESENTATIVES

IGOA Spreads Wings Wider

WINGS of the Independent Garage Owners of America are rapidly spreading wider, especially in the Southeast.

First hatched more than six years ago at Joplin, Mo., by a handful of garagemen seeking to build an association dedicated to raising the standards of garages generally and their acceptance by the car-owning public, IGOA has now set up units in approximately 40 of the 50 states, with more in the making.

Ralph H. James, former garageman at Tulsa, Okla., and a founder of IGOA, who later left the repair business to give his full time to being executive director of the movement from its headquarters at 36½ North Lewis Ave., Tulsa, reported to SAJ last month:

A new unit has been set up at Louisville, Ky.

A meeting of garagemen, wholesalers and factory men was staged at Nashville Dec. 1. (This was similar to an earlier meeting held at Memphis.)

Garagemen assembled at Birmingham Dec. 3 to hear James J.

Mitchell, Birmingham garageman who has long promoted IGOA in that state; James, who recounted IGOA's progress and the needs for building a strong state group, and William C. "Bill" Herbert, editor of SOUTHERN AUTOMOTIVE JOURNAL, who told of successes achieved by other automotive segments through strong associations.

Garagemen from units at Jackson and Clarksdale spearheaded a state meeting Dec. 6 at Jackson, Miss.

A third unit each has been born in Montana, Nebraska and Missouri and four units have been completed in the state of Washington.

One hundred and 70 garagemen assembled at Pittsburgh, Pa., and 61 promptly applied for membership. Subsequently, 12 garagemen from Beaver County, near Pittsburgh, have set up a unit with the assistance of the Youngstown, Ohio, group of IGOA.

James' office is working with groups in Massachusetts, New York, Maryland, Kansas and Illinois which are seeking to come under IGOA's wings.

"Florida has made considerable progress, as have North Carolina, Arizona and New Mexico," he reported. "There has been some activity in other states."

The mid-year board meeting of IGOA will be held Jan. 12-14 at the Alvin-Plaza Hotel in Tulsa. Guest speakers will include Ira Saks of Cleveland, Ohio, former parts manufacturer well-known in the service industry; Henry S. Clark of Atlanta, executive director of the Georgia Automotive Wholesalers Association and a member of IGOA's advisory board, and Mel Turner of Chicago, curriculum director for the Automotive Service Industry Association and a veteran garageman.

Art Kittell of Pittsburg, Kan., is president of IGOA.

Lost Leg Doesn't Mean Lost Job Opportunity

ROBERT Knight, an employee of Alabama Auto Parts Co., Birmingham, Ala., who lost a leg in a hunting accident six years ago, has been succeeded in his job by another "handicapped" worker, Larry Koonce, 23.

Knight, however, was not fired

nor has he quit working. Instead he was promoted to purchasing agent for the company. Until his accident, Knight had worked for a railroad for 11 years.

"It is only because Knight did such a good job," said Irvin Siegal, the firm's vice president, "that we asked for another handicapped person to do his job."

Koonce, who is six feet and weighs 180 pounds, was struck by polio when he was three years old. An accident while riding a motorcycle broke his already injured left leg, with the result that it is six inches shorter than the right one.

Koonce doesn't think of himself as a handicapped worker. "If I couldn't do the job, I wouldn't apply for it," he said. "I don't feel that my injured leg has kept me from doing anything I wanted to do."

Borg-Warner Will Spend \$40,000,000 in '61

BORG-WARNER Corp. will spend a record \$40,000,000 on new plants and equipment in 1961, President Robert S. Ingersoll announced.

The official reported that about three-fourths of this amount will go into domestic expansion and modernization and the balance in facilities in other countries. He emphasized the increasing importance of research and development of new products and cited several examples that he believes will strengthen the company's future business.

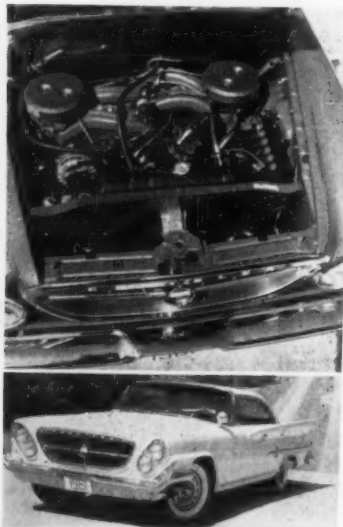
Stating that the automotive parts business has a good future and that "it must be based on innovation," he named these current Borg-Warner new product developments: spin-resistant differential for improved automobile traction, a retarder (braking device) for trucks and buses, fuel injection, drive line mechanisms to eliminate the humps in car floors and the acquisition of a division which puts the company in the automotive seal business.

McCord Corp. Enlarges Air-Cooling Plant

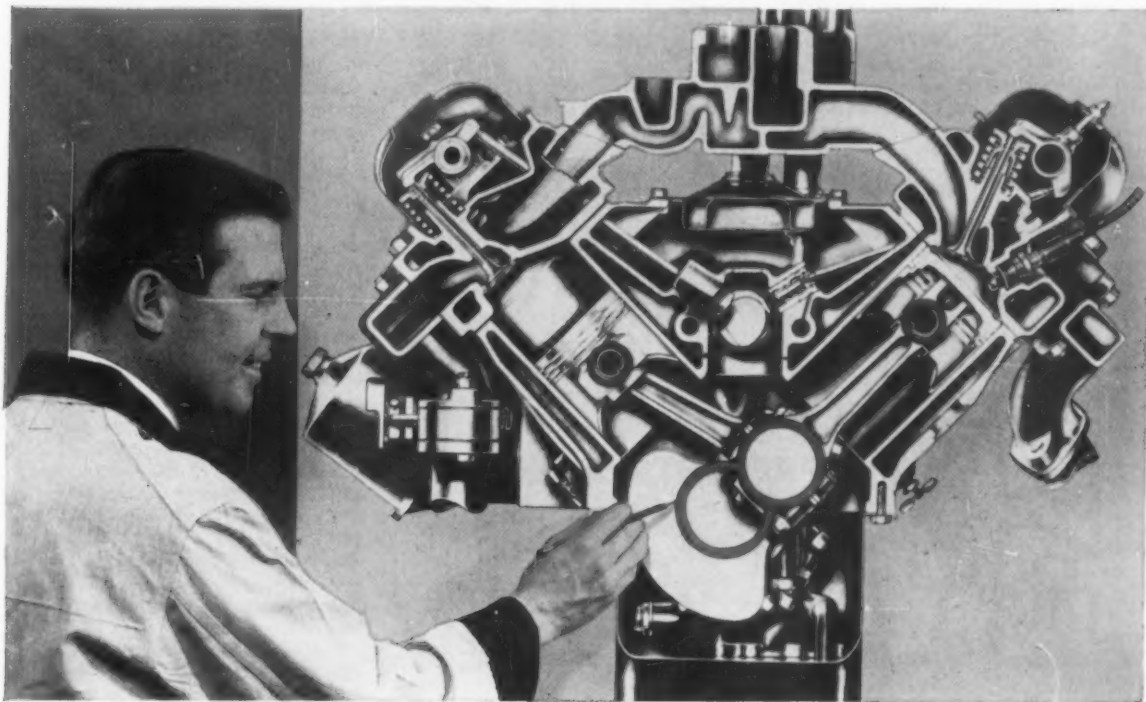
A SECOND major expansion at its Washington, Ind., air-conditioning plant within the last five years, announced by McCord Corp. of Detroit, represents an increase of over 100% in manufacturing area for that period.

Now in operation, the new facilities reportedly will substantially increase the capacity for production of automotive air-conditioning units and related components.

The Chrysler 300G engine produces 375hp at 5,000rpm and has a 10.1 to one compression ratio. The alternator replaces the conventional generator and produces power for storage even when engine is at idle. Cleaness of line and uncluttered appearance are characteristic of the Chrysler 300 series. Large air intake and canted headlights highlight front-end styling.



Better products, *faster*, from your Federal-Mogul jobber:



Stretch engine overhaul intervals with replacements of Federal-Mogul bearings



Leaders in quality . . . in ready availability for American and imported car engines

More compact engines, higher ratings per pound of weight, shrunken cooling systems, accelerated speeds, additional accessories, all add up to greater taxation on engine bearing stamina.

Federal-Mogul engine bearings are engineered to meet these exacting demands. That's why engine specialists insist upon Fm bearings to restore like-new power. And as a *plus value*, you give customers improved bearings which stretch overhaul periods.

Unlimited stocks of types and sizes make availability no problem to you. Call your nearby Federal-Mogul jobber today!

FEDERAL-MOGUL ENGINE BEARINGS

FEDERAL-MOGUL SERVICE

DIVISION OF FEDERAL-MOGUL-BOWER BEARINGS, INC. • DETROIT 13, MICHIGAN



Dealers with Loss Increase

THE percentage of franchised dealers showing some operating loss for the first nine months of this year was 10.8%—up from 7.9% at the end of June, according to the National Automobile Dealers Association's survey.

The report also stated:

The new-car dealers finished the first nine months of the year, and

the first phase of the clean-up operations, with combined operating profit, before federal taxes, of 1.4%, or \$68 per new car sold. This was a drop from the six months' average of 1.7%, or \$90 per car.

Over-all gross profit rose slightly to 15% from the half-year mark of 14.6%. This was entirely due to the changing "mix" of the dealers' sales,

with the high-gross service business accounting for a slightly increased proportion of the total.

Selling expenses showed little change, but with a reduction in sales volume during the third quarter, the ratio of fixed expense to sales moved up to 9.9% from the six months average of 9.3%. Total expense increased from 12.8% to 13.6%.

Washout gross from combined new- and used-car sales dropped substantially in the third quarter for the top volume dealers, but those in the smaller volume groups managed to hold close to the figures previously reported. Quite surprisingly, considering the preponderance of '60 models included in third-quarter sales, the over-all drop in the washout average was only from \$386 to \$383 between June 30 and the end of September.

As a percentage of combined new- and used-car sales, washout gross averaged out to 9.64%. As noted previously, this is one of the most consistent figures in the dealers' operations, moving between 9.5 and 10% through the years since NADA has followed it.

Car absorption (the ratio of washout gross after selling expenses to fixed overhead) dropped to 43.7% from the half-year figure of 49.5%.

The average selling price of used units continued to move downward, dropping to \$788 from the \$813 average reported at the end of June.

Said NADA:

"The fourth-quarter picture is still very much clouded by the record carry-over of old models still to be disposed of, while demand for the new ones has not kept pace with production. Barring a decided change in buying sentiment, which cannot be foreseen at this point, it can be guessed that most dealers at year-end will be willing to settle for their nine-months profits if they can keep them intact."

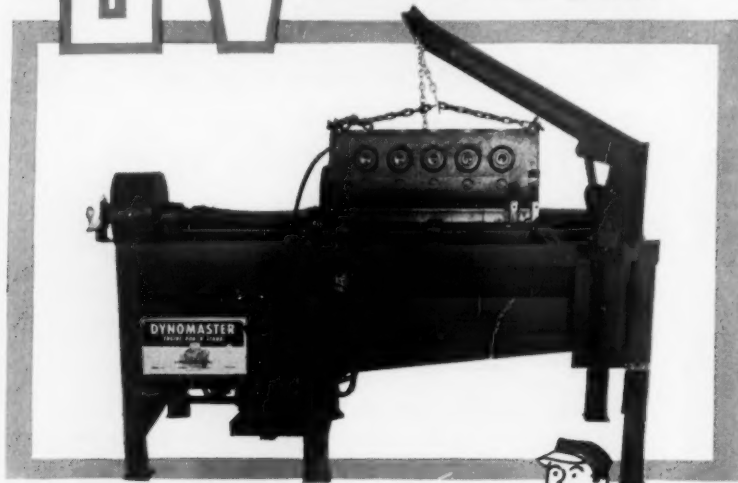
Lee F. Desmond Retires From Dodge Division

LEE F. Desmond, executive assistant to the general manager of Dodge Division, retired from the industry last month.

Born in Canada, Desmond began his automotive career as a salesman in Minneapolis in 1921. He later became district manager for Chevrolet and in 1944 he joined Dodge as a district manager in the Kansas City region. He was regional manager in 1949 when transferred to headquarters in Detroit as a sales supervisor. For the 16 months prior to his retirement he was executive assistant to the general manager.

S-V

PRESENTS A NEW Model D-11A-Dynomaster ENGINE RUN-IN AND TEST STAND



Ask the Man Who Operates One

Exclusive Features Available Only in Storm-Vulcan Model D-11A Dynomaster: Variable speed range from 350 RPM to 750 RPM; Equipped with Morse Twin Disc Clutch; All engines drive from fly-wheel flange; Unique drive design permits quick, accurate coupling; Increase profits by eliminating "costly comebacks."

Write for Free Literature on all S-V Equipment
Storm-Vulcan, Inc.

WHERE EQUIPMENT IS DESIGNED WITH THE OPERATOR IN MIND
2225 Burbank Street • Fleetwood 1-3735 • Dallas 35, Texas



LET MOPAR HELP YOU START THE NEW YEAR RIGHT WITH THE RIGHT PARTS INVENTORY FOR YOUR NEEDS

This is year-end inventory and stock renewal time. The action you take right now may go a long way toward determining the profits you can expect from your parts and accessories business next year.

To help you select fast-moving, quality replacement parts, a good man to consult is your MoPar Wholesaler or Dealer. He is familiar with conditions in your locality. And he handles the line that is precision-engineered to meet the exacting specifications of Chrysler Corporation.

Call your MoPar Wholesaler or your Plymouth Valiant • Dodge Dart Lancer • De Soto Chrysler Imperial or Dodge Truck Dealer today. He can help you stock the items that meet your local needs.

With the help of the MoPar man, you know you'll have the right part at the right place at the right time!

***Sell the line that keeps your customers
sold on you all year long—MoPar***



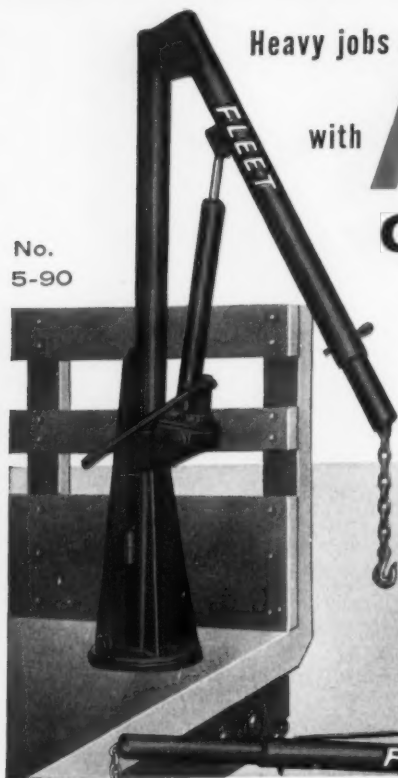
Lifting Equipment for Every Service Need

Heavy jobs are faster, easier, safer

with

FLEET
CRANES

No.
5-90



TRUCK MOUNTED UTILITY CRANE

½ Ton-1 Ton

Rugged, low cost cranes for mounting on delivery or service trucks. Adjustable telescoping extension boom, standard at no extra cost. Put extra mounting wells in several trucks, at machine tools, etc. for greater crane usefulness. Manual-hydraulic and electric-hydraulic models.

HYDRAULIC MOBILE SHOP CRANES

You can move these cranes to any spot in the shop — wherever there's heavy lifting to be done. Save time, money and backache lifting and moving heavy motors, machinery, boxes and crates. Built for long, trouble-free service.

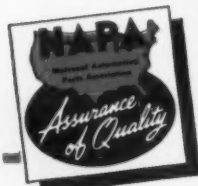
No. 5-87
½ Ton

No. 5-88
¾ Ton

No. 5-89
1 Ton



Write for complete
information and price



EDGEWATER
AUTOMOTIVE DIVISION

SAINT JOSEPH, MICHIGAN



Robert R. Snodgrass (shown here), president of Atlas Finance Co., Atlanta, Ga., has been elected president of the American Finance Conference. Other officers include Vernon Hinkle, president of The Bankers Investment Co., Hutchinson, Kan., and Stuart H. Smith, president of Securities Investment Co., St. Louis, who were elected vice presidents, and James S. Mentzer, secretary-treasurer of the American Securities Division, who is treasurer. John Masterson is secretary. Paul C. Jones, president of A.S.C. Corp. in Indiana, was named chairman of the executive committee.

Finance Group Warned Of Factory Financing

"THERE are forces at work in our economy which, left unchecked, must end by destroying our American free enterprise system and annihilating the vital segment of American financial community."

Congressman Emanuel Celler of New York sounded this warning before more than 800 sales finance company executives at the 27th annual American Finance Conference convention held last month at the Palmer House in Chicago.

"I refer to the practice of General Motors since 1919—only this year resumed by Ford—of automobile manufacturers maintaining their own captive sales finance companies," Celler said.

"This practice, I am convinced, is not only disastrous to the independent sales financing industry, but spells trouble for many other economic groups and for the entire competitive system. It is destined, unless checked, to impair competition in the automobile manufacturing industry.

"It must further depress the condition of ostensibly independent retail dealers to one of economic serfdom and ever-growing dependency on the factories. It subjects the consumer to manipulation by concealed but fluctuating credit charges, to the point where he is ever less able to determine how much he is paying for credit and whether he can afford the obligations he assumes."



GM President Gordon

How Planned Obsolescence Benefits Car Buyers

AUTOMOBILE buyers have "benefited tremendously" from the annual model change, according to GM President John F. Gordon.

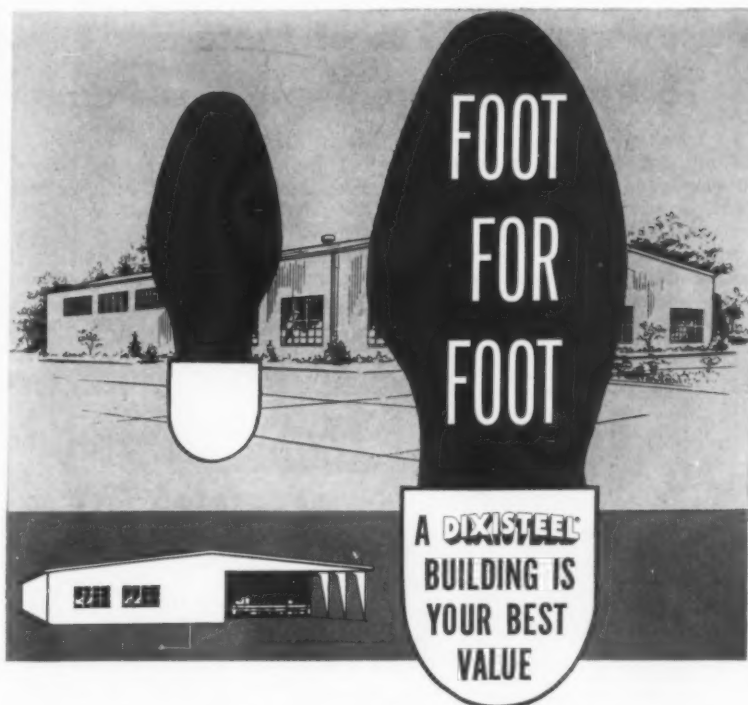
The "widely misunderstood" pattern of obsolescence in the automotive industry, he said, has spurred the improvement of new cars, made millions of used cars available and provided "better jobs for more people."

Gordon, with Chairman Frederic G. Donner and Honorary Chairman Alfred P. Sloan, Jr., addressed more than 600 top business, financial and industrial leaders at a luncheon preceding the opening of GM's Motorama of 1961 in New York. He said, "Neither our industry, nor any other industry for that matter, need apologize for dynamic obsolescence. It makes a substantial contribution to our economy and to our customers."

Recalling an advertisement published by R. E. Olds in 1912 which proclaimed: "My farewell car. I do not believe that a car materially better will ever be built," the GM president said, "What if all manufacturers had adopted this attitude back in 1912?"

"It is clear to me that new-car buyers have benefited tremendously over the years from what has been termed planned obsolescence, but which we think is more accurately called dynamic obsolescence. But new-car buyers are not the only ones to gain from dynamic obsolescence. They are a minority because only about half as many cars are bought new as are bought used."

"If our new-car customers did not trade in their old cars with lots of mileage still in them, thousands of your neighbors and mine would probably be riding to work and market on bicycles, as was the case until recently in Europe."



Owning a beautiful, modern DIXISTEEL Building constructed to meet your own requirements is cheaper than renting space that barely gets you by!

Most of these can be erected on your foundation for less than \$2 per sq. ft.

Any Size or Type

There are over 150 standard units in the DIXISTEEL line. Any height, width, depth, or type with 1½/12 or 4/12 roof pitch. Just tell us what your needs are and let us come up with an idea and a price, both of which will make you happy.



ATLANTA, GA.—This combination office and warehouse has 30,000 sq. ft. with a 20 ft. eave height. Basic unit is Dixisteel Lo-Line LRF 10020 x 300.

**CHEAPER
THAN
RENT**



BILOXI, MISS.—This modern bottling plant and office has 24,000 sq. ft. with 20 ft. eave height. Basic unit is Dixisteel Lo-Line LRF 10020 x 240.

**PAY ON
EASY
TERMS**



ST. PETERSBURG, FLA.—This fabricating shop and show room has 11,200 sq. ft. including 20 x 80 paint shop. The basic unit is a Dixisteel Lo-Line LRF 8014 x 120.



Steel Building Division
Atlantic Steel Company

P.O. Box 1714, Atlanta 1, Georgia • TRinity 5-3441

Price Prompts 27% of Motorists To Patronize the Same Gas Pump

OF THOSE motorists who generally buy their gasoline at the same service station, 27% now give price, credit or premiums as the reason, compared with 17% in 1952.

Also, when asked why they bought the same brand, twice as many motorists, percentage-wise, mentioned price as did eight years

ago.

These and other answers have been compiled in a "Profile of the Motorist" survey based on 4,500 personal interviews carried out countrywide during the first four months of this year by Du Pont Petroleum Chemicals Division.

Fourth in a series of Du Pont-

sponsored studies of motorists' buying habits and service station operations, the current survey compares replies with those received in 1952 and 1956 when somewhat similar interviews were conducted.

Price plays an important factor in oil changes, according to the study. Thirty-five per cent of those who shopped around for oil did so because they could get it cheaper, as compared with 25% eight years earlier. Six per cent—up from one per cent—said they changed the oil themselves.

Motorists buying at the same station for less than a year increased from ten and a half per cent to 17½%, and well over a third of those who had switched stations recently gave "moving into new neighborhood" as the reason.

Interviewers found that the majority of gasoline buyers, or 70%, buy "by the tankful." Two other classes of buyers bought "so many dollars worth" (25%), or "so many gallons" (five per cent). Of the former, a little more than half bought two dollars worth, and of the latter, 53% bought five gallons at a time and 34% were in the ten-gallon class.

The percentage of those buying regular gasoline was lowest in the South (54.5%) and highest in the North Central states (63.7%). For the country as a whole, 58.2% of motorists interviewed this year said they usually purchased regular gasoline and 38.6% premium, compared with 48.5% regular and 40.9% premium in 1952.

New in the 1960 survey was the question, "How do you know when to change oil?" One to two thousand miles was the most popular answer, accounting for 34% of those queried; two to three thousand miles came next (10%); above 3,000 miles, eight per cent; mileage not specified, 17%, and 22% replied simply that it depended upon condition of oil in the car.

Use of credit cards is gaining, the surveyed showed. In 1952 only about 12% of those interviewed used credit cards. Use gained to 18% by 1956 and this year rose to 24½%.

Polk Dies in Tennessee; Was President's Kin

JAMES K. Polk, Jr., 79, great-great nephew of President James K. Polk, and founder of Tennessee Auto Co., second automobile business established in Nashville, Tenn., died last month in Bolivar.

Born in Nashville, Polk moved to Macon Plantation at Inverness in 1932 and lived there until death.



P-501

Special for Manifold Heat Control Valves

To protect against

- ☒ SLOW WARM-UP
- ☒ BURNT SPARK PLUGS
- ☒ POOR ACCELERATION
- ☒ CARBURETOR ICING

Lube charts specify that manifold heat control (heat riser) valves must operate freely for top engine performance. PART-EASE does the job! Quickly cuts through rust, lead, carbon and dirt deposits to free stuck valve shaft. Leaves a long-wearing, heat-resistant, non-gumming, graphitized film. Prevents rust. Keeps the valve operating freely. Use PART-EASE on every tune-up and lube job. It Pays! In 8 oz. cans and 12 oz. aerosols.

**"ONLY PART-EASE™
TAKES APART—
KEEPS APART"**

AGS®
PRODUCTS

AMERICAN GREASE STICK COMPANY Muskegon, Michigan

Manufacturers of these other "Standards of the Industry"

LOCK-EASE® DOOR-EASE® SIL-GLYDE® RUGLYDE®

high
heat
or
deep
freeze



"E" Series HRC*
WHEEL CYLINDER
CUPS *with Expanders*
and Springs **always**
work better!

In high-heat conditions caused by smaller drums and faster stops . . . in cold-weather starts (-40°F.), you'll find that EIS "E" Series "HRC Wheel Cylinder Cups provide a positive, longer-lasting seal! And, between cups and cylinder wall, the Expanders and Springs provide the slight pressure needed at the point of contact.

EIS "E" Series Cups with Expanders and Springs are built into every EIS Wheel Cylinder . . . and there's no cost premium! Use them for repair and replacement on all cars! Use them in all your brake work . . . because they work better!

* HEAT-RESISTING COMPOUND



Available in Shop-Size Cabinet Assortments and in Standard Ten-Paks . . . included in every EIS Wheel Cylinder Repair Kit . . . built into every EIS Wheel Cylinder!

EIS AUTOMOTIVE CORP., Middletown, Conn.

Ask your EIS Distributor or write for catalogs



Freedom Council to Aid Service Station Market

STEPS to protect and increase economic freedom in the service station market have been taken by the Freedom Council of the Automotive and Petroleum Inter-Industry Committee.

The council was established by the National Congress of Petroleum Retailers, which represents 40,000 service stations, and the Automotive Service Industry Association, which represents 450 manufacturers and

4,500 wholesalers of automotive products.

Council methods approved to combat pressure by large oil companies on their service station lessees as to business methods and products handled, are:

1.—The council, with the help of attorneys for the participating industry associations, will act as a clearing-house to give assistance to service station operators on their individual complaints of lease domination, pressure as to products handled and lease cancellations to en-

force company policy on products handled.

2.—Combining self-help with law enforcement activities, investigations and negotiation of complaints received will be undertaken—with flagrant or unresolved complaints channeled to Washington anti-trust enforcement agencies.

3.—Efforts to secure strengthening of the federal anti-trust laws to more adequately prevent unfair pressure tactics which close the service station market to competing wholesalers.

TIME-SAVER THE MECHANIC'S FRIEND AMAZING NEW NON-CLOGGING SPECIAL FILE FOR PLASTICS

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\$9.95 Yours for Only **\$3.50**
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The Best Working Metal Menders in America

GET IT FROM YOUR JOBBER NOW

If necessary work out a deal with him to ship 1 case now, plus the Time-Saver File, and the second case in 30 days. If your jobber can't supply you, write us at once for the names of nearby jobbers who can. Don't delay having the money-saving advantages of this revolutionary File.



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SOUTHWESTERN REPRESENTATIVES

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Dodge Advisory Group Gets Six from South

Six Southerners among the 24 Dodge dealers named to the national committee of the Dodge Dealer Advisory Conference are:

Atlanta region—John Lander of Atlanta, Ga.; Charlotte—W. B. Scott of Charlotte, N. C.; Dallas—G. C. Dowell of Lubbock, Texas; Kansas City—Byron J. Clark of Lawrence, Kan.; Memphis—P. H. McNulty of Pine Bluff, Ark., and St. Louis—Charles Isbell of Kirkwood, Mo.

Rebuilders Supply Co. Opens in Atlanta

REBUILDERS Supply Co., specializing in supplies used in rebuilding automotive parts, has opened at 1792 Marvin St., N.W., in Atlanta, Ga.

In addition to insulation materials, magnet wire, varnish, end fibers and insulation paper, the company will handle all rewinding equipment, according to Vice President H. A. McCullough.

Maryland Dealer Group Celebrates 50 Years

OVER 300 acceptances reportedly were received three weeks prior to the golden anniversary celebration of the Automobile Trade Association of Maryland last month at the Emerson Hotel in Baltimore.

Dr. Kenneth McFarland was scheduled as guest speaker through courtesy of General Motors Corp. Other highlights of the event included Broadway entertainment and a cocktail party.

Mills Dies in Kingsport, Tenn.

William H. Mills of Mills Motor Co. (Chrysler-Plymouth), Kingsport, Tenn., died recently. He was a charter member of the Tennessee Automotive Association.

FREE DIVIDENDS... WITH NEW **AIRTEX DO** FUEL PUMP PROGRAM



Here's The Greatest Fuel Pump Sales Pageant Yet

Feast your eyes on these AIRTEX Dividends . . . Sparkling . . . Valuable . . . Honest to goodness values. How do you get them? Simple. Order the AIRTEX DO PAKage of eight fuel pumps; the stock that you need. Each assortment is a normal 8 week stock which you probably will use in less time . . . this proves DO stands for Dividends with Opportunities. With the DO assortment you'll receive your choice of these handsome, nationally advertised Dividends. Choose the Corning Ware Royal Family Set or the 5-Transistor Radio or the 1/4" Skil Power Drill. You pay lowest price for 7 pumps and special

promotional price for the extra pump, plus Dividend; when you sell the extra pump, the Dividend is yours free.

The DO PAKage contains the finest fuel pumps available to assure you of top sales OPPORTUNITIES. Exclusive AIRTEX features are built into every AIRTEX Fuel Pump to give your customers long-lasting, care-free performance.

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HELPFUL BOOKLETS FREE!

On this and the following pages is an excellent selection of free Automotive literature. List numbers of those desired on the coupon and mail to SOUTHERN AUTOMOTIVE JOURNAL.

102 MODEL NUMBER INTERCHANGE— Handy reference sheet with complete listing of all passenger cars 1946 through 1960 by model number interchangeably with model name. Saves look-up time by including car model data not found elsewhere. Useful as a supplement to every automotive parts catalog. Kem Mfg. Co., 20-21 Wagawar Rd., Fair Lawn, N.J.

103 SAMPLES, BOOKLETS, AND CATALOG SHEETS—describing the DL Handi-Cleaner available on request. DL Products, Inc., Banite Bldg., Buffalo, N.Y.

105 WAGNER AIR BRAKE AND ROTARY AIR COMPRESSOR BULLETIN Discusses in detail straight air and air-over-hydraulic air braking systems. Contains an explanation of the operation of the Wagner Rotary Air Compressor complete with diagrams, cross section drawings, and photographs. Lists by catalog numbers component parts as well as field installation kits. Write for Catalog KU-201, Wagner Electric Corporation, 6362 Plymouth Avenue, St. Louis 14, Missouri.

106 CAP MERCHANDISER—How to increase profits by use of radiator and gasoline cap Merchandiser. The space saving Merchandiser saves you time and money while increasing sales and profits. Ask for detailed information. Stant Mfg. Co., 1620 Columbia Ave., Connorsville, Ind.

108 ELECTRICAL EQUIPMENT FOR 1960 PASSENGER CARS—New booklet, fully illustrated covers description of units as well as servicing and adjustments of charging circuit, starting circuit and ignition circuit. Also covers D.C. and A.C. Generators. Delco-Remy Div., Technical Literature Section, Anderson, Ind.

109 AMMCO BRAKE SERVICE. ENGINE REPAIR, AND HONING TOOLS AND EQUIPMENT—Catalogs, describing the Ammco line of brake drum lathes, brake shoe grinders, brake drum micrometers, brake shoe setting gages, brake hones, brake bleeders, brake safety checking instruments, pin fitting honing machines, small bore hones, cylinder hones, cylinder surfacing hones, ridge reamers and torque wrenches. Ammco Tools, Inc., 2110 Commonwealth Ave., North Chicago, Ill.

111 SELECTION GUIDE OF SPECIALIZED LUBRICATION TOOLS—Set up in chart form covering 19 makes of cars and 8 specialized tools. Especially helpful to inexperienced operator, making it practically impossible to select the wrong gun or accessory for any given operation. Also has chassis drawing pointing out every part named. Form No. 38-808. Alemite Div., Stewart Warner Corp., 1826 Diversey Parkway, Chicago 14, Illinois.

112 SOUND SLIDE FILM—Entitled "Automotive Wheel Bearings" is the first

in a series of audio-visual aids designed to provide bearing salesmen, servicemen and replacement parts men with practical and useful information on various applications for ball, roller and engine bearings and on oil seals. Federal-Mogul Service, 11031 Shoemaker Ave., Detroit 13, Mich.

114 32 REASONS FOR OIL CONSUMPTION—An easy-to-use, indexed corrective manual listing 32 major oil consumption problems and remedies. Informative, illustrated, prepared by one of the top technical staffs in this field. Write—Oil Consumption Booklet. American Hammered, 2001 Sanford Street, Muskegon, Mich.

116 REMANUFACTURED ENGINE BROCHURE—New 6 page folder helps sell vehicle owners on the many advantages of remanufactured engines. The back provides space for the installer, the jobber, or the rebuilder to imprint his name. It provides an excellent sales aid piece for engine rebuilders and their jobbers to supply to service outlets installing engines. Muskegon Piston Ring Co., Muskegon, Mich.

117 AUTOMOTIVE ELECTRICAL EQUIPMENT CATALOG #D-200—Applies to automobiles, trucks, trailers, farm and industrial equipment. New 64 page catalog covers entire field of automotive switches, connectors, wiring accessories, etc. Voltage ratings are clearly specified in large type for all switches, and other units. Cole-Hersee Co., 20 Old Colony Ave., Boston 27, Mass.

118 BRAKE SERVICE GUIDE—Complete instructions for inspecting, flushing and bleeding the brake system. Handy trouble check chart. Write for Bulletin HU-411. Wagner Electric Corp., 6400 Plymouth Ave., St. Louis 14, Mo.

119 FILTER SERVICE MANUAL AND SPECIFICATIONS—24 pages contains useful service information on oil, air and fuel filters. Pictures and graphs give oil filter service on all late model cars. Also includes filter specifications for domestic and foreign cars and trucks as well as cross reference charts. Purolator Products, Inc., 970 New Brunswick Ave., Rahway, N.J.

120 NEW GRIZZLY BOOK—Nine basic steps to extra miles of safe braking. Illustrated charts enable maintenance men to visualize faulty braking conditions and help them in trouble shooting and servicing truck and bus brakes. Grizzly Mfg. Co., 700 W. Caroline St., Paulding, Ohio.

121 SALES AIDS AND MERCHANDISER CATALOG, FORM D-227—Features a complete line of quality automotive electrical equipment mounted on effective "Business Getting" displays. This colorful 8 page catalog covers the entire field of switches, connectors, voltage reducers, etc. for automotive truck, trailer, bus, marine, farm,

earth-mover and industrial equipment. Cole-Hersee Co., 20 Old Colony Ave., Boston 27, Mass.

122 TIRE RETRUBING—An illustrated bulletin about this newest extra profit service. Describes Bear "On-A-Car" Service which makes possible tire retribing right on-the-car. Explains method using most advanced truing principle. Bear Mfg. Co., Dept. SAJ, Rock Island, Ill.

123 AERO-SEAL HOSE CLAMPS—An illustrated 4-page folder giving clamp ranges, mechanical information, engineering data, stock numbers, packaging, etc. Breeze Corps., Inc., 700 Liberty Ave., Union, N.J.

125 STANDARD DUTY GENERATOR REGULATORS—A 16-page 8½ x 11 inch booklet covering the operation and maintenance of Delco-Remy regulators. (62 pictures) Contains illustrations showing various steps of adjustment. Will help automotive electricians understand and service regulators. Delco-Remy Service Department, Anderson, Indiana.

127 HYDRAULIC BRAKE FLUID SERVICE—HOW TO CHECK, DRAIN, FLUSH, REFILL, BLEED—Easy reference book that contains helpful service instructions as well as detailed descriptions and illustrations of the latest methods and procedures for profitably servicing hydraulic braking systems. Send for Bulletin HU-17H, Wagner Electric Corporation, 6362 Plymouth Avenue, St. Louis 14, Missouri.

129 NEW BLUE RIBBON ILLUSTRATED PRODUCTS CATALOG—describing and displaying the complete line of refinishing, polishing and chemical specialty products. International Metal Polish Co., 1910 Quill St., Indianapolis, Ind.

133 CATALOG NO. 56—Features more than 300 Champ-Items automotive replacement parts for all makes of cars. A handy service book. Champ-Items, Inc., 6190 Maple Ave., St. Louis 14, Mo.

134 MOOG RINGLINER—Illustrated piston ring catalog carries listings and product information on complete line of Moog cast iron, partial chrome and Chrome Plus lines. Moog Industries, Inc., 6650 Easton Ave., St. Louis 14, Mo.

138 PLUG CHEK—A colorful wall banner showing condition of spark plugs under various driving conditions. This service tool is designed to assist service men in diagnosing spark plug heat range problems. The Electric Autolite Co., Toledo 1, Ohio.

140 PRESSURIZED COOLING SYSTEM—Servicing and maintenance of the pressurized cooling system is detailed in a booklet available from Stant Mfg. Co., 1620 Columbia Ave., Connorsville, Ind.

141 MOOG STREAMLINER CATALOG—Carries exploded views, detail illustrations and listings of leaf springs, main leaves, spring parts, shackles, shock links, tie rod ends, drag links, king bolts, coil springs and other coil action parts for cars and trucks. Moog Industries, Inc., 6650 Easton Ave., St. Louis 14, Mo.

142 1958 MUFFLER CATALOG SUPPLEMENT—Lists high efficiency mufflers and dual exhaust equipment for each model of 1958 cars. Grand Automotive Products, 2455 N. Ruby St., Melrose Park, Ill.

146 HAND CRIMPING TOOL—Describe five circular. Strips and also crimps Rajah terminals to ignition cable. The Rajah Co., 35 Verona Ave., Newark, N.J.

149 TIRE & TUBE REPAIR MATERIALS are listed in this new 12-page catalog. Gives the complete line offered and

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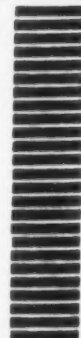
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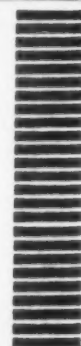
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HELPFUL BOOKLETS FREE!

also the stock numbers, quantity in package and the shipping weight. Ace Rubber Co., P.O. Box 6147, Dallas, Texas.

156 BONDO PLASTIC FIBERGLASS PASTE DIRECTION FOLDER—8 pages of easy-to-follow, how-to-do-a-better-body-repair job with this "miracle body filler that hardens like rock." Easily, quickly and conveniently applied, Bondo permanently restores surfaces "like new" for automotive, marine and industrial repairs of metals, wood, stone and concrete. Bondo Div., Jaycee Chemical Corp., 1104 Forest Road, Northford, Conn.

162 BONDO SERVICE BOOKLET—ILLUSTRATED—Describes in complete detail application and use of plastic-fiberglass filler for the auto body repair—showing different types of repair work and advantages and how to save time on body work. Bondo Div., Jaycee Chemical Corp., Northford, Conn.

164 AIRTEX FUEL PUMPS—New and rebuilt fuel pumps. Catalog AX-70. Airtex Automotive Div., Inc., Fairfield, Ill.

166 CYLINDER HEAD STOCK REMOVAL CHART—A handy pocket size showing year and model of car, standard compression and the amount of cylinder head stock removal necessary to attain the increased ratio. Storm-Vulcan, Inc., 2225 Burbank St., Dallas 35, Texas.

167 1960 LAMP & FLASHER SERVICING GUIDE—Includes following information: Vision-aid headlamp information, aiming instructions, installation instructions for sealed beams and miniatures, complete auto lighting service, servicing directional signals, and specifications for 1946-60 American and European cars. Tung-Sol Electric, Inc., 95 8th Avenue, Newark, N.J.

168 CRANKSHAFT GRINDER MANUAL—A colorful 8-page manual containing engineering, construction and operation details of the new Storm-Vulcan model 15-A Crankshaft Grinder. It is well illustrated for easy understanding, and describes fully the special features and advantages of the new 15-A Crankshaft Grinder designed for fast production and precision. Storm-Vulcan, Inc., 2225 Burbank St., Dallas 35, Texas.

172 A-1919 FUEL PUMP SHOP MANUAL—Contains the operation, testing, repair, installation and removal of fuel and vacuum pumps. D. Dwyer, AC Spark Plug Div., Flint 2, Mich.

173 HYDRAULIC PARTS—Complete master catalog of the complete line of Eis hydraulic parts. Lists and illustrates the complete line of repair kits, hoses, stop-light switches, brake-master and wheel assemblies. Information complete up to 1957. Eis Automotive Corp., Middletown, Conn.

175 A-1920 SPARK PLUG SHOP MANUAL—Contains inspection, cleaning and installation procedures as well as spark plug heat range system. D. Dwyer, AC Spark Plug Division, Flint 2, Mich.

178 MUFFLER SERVICE MANUAL—Gives simple step-by-step instructions on installation short cuts for any pipe or muffler service problem. The manual 36 pages in color and fully illustrated, will

enable dealers to save time on all installations reducing most to 15 minutes or less. The AP Parts Corp., 1801 Spielbusch Ave., Toledo 1, Ohio.

179 A-2446 CHART—(In full color) Illustrating "What Your Spark Plugs Can Tell You About Your Engine."—D. Dwyer, AC Spark Plug Div., Flint 2, Mich.

185 SERVICE ENGINEERING BROCHURE—A new brochure comprised of 14 Service Engineering articles covering oil consumption problems, ring problems, oil control problems peculiar to the modern high compression-high vacuum engines, piston and piston ring nomenclature and several articles on scuffed rings and how to avoid scuffing and scoring. Perfect Circle Corp., Hagerstown, Ind.

186 FILTER CATALOG—Offers details on complete line of oil, air, fuel and cooling system filters. Lee Filter Corp., Talmadge Rd., Edison, N.J.

190 COOLING SYSTEM CLEANING—Bulletin titled "Cooling System Maintenance an Open Door to Greater Profits," describes Jenny Steam Thoro-Purge the most modern and thorough method of reverse flushing cooling systems; also shows increased profits possible from its use. Write for Bulletin STP-5, Homestead Valve Manufacturing Co., P.O. Box 99, Coraopolis, Pa.

191 1959 REBUILT AUTO PARTS CATALOG—The first complete catalog to be published this year is now being distributed to jobbers and distributors. It contains listings of the 16 different items that Kimco rebuilds. For quick and easy use, the parts are arranged in logical sequence and broken down as to make and model of automobile, truck and tractor. Kimco Auto Products, Inc., 1520 Texas St., Memphis, Tenn.

193 WIRE & CABLE CATALOG—A condensed catalog of electric wire and cable, complete with specifications for all passenger cars. The Electric Autolite Co., Toledo 1, Ohio.

194 TWIN POST LIFT WHEEL ALIGNMENT OUTFIT—Illustrated 8-page catalog, shows how this equipment does not limit floor space, shows how anyone can do wheel alignment and points out fast reading advantages. Weaver Mfg. Co., Springfield, Ill.

198 SERVICE JACK CATALOG PAGE—Model WA-66, 1¼-ton and 1½-ton service jacks are fully described. Light weight of these models makes them ideal for road service trucks and away from shop service. Includes complete specifications. Weaver Mfg. Co., Springfield, Ill.

200 FREE WHEEL LIFTS AND ROLL ON LIFTS CATALOG PAGES—Two pages gives dimensions, capacity and other pertinent information about these two Weaver products. Weaver Mfg. Co., Springfield, Ill.

203 COOLING SYSTEM CARE BULLETIN—is designed for posting in the service station to guide station attendants in preparing cars for summer driving. During the hot vacation months, cooling system care is vitally important to the car owner and can be a most profitable service for the station operator. Warner-Patterson Co., 600 S. Michigan Ave., Chicago, Ill.

205 HOW TO INCREASE ENGINE LIFE 90%—Illustrated booklet tells how to reduce wear to moving parts and insure better performance from automobiles or trucks by explaining the air filter—the vital piece of equipment through which an engine breathes. Fram Corp., Rumford Post Office, Providence 16, R.I.

206 THE SERVICE STORY ON SHOCK ABSORBERS—Handbook points out that one of every four cars on the road is in need of some kind of shock absorber service. It illustrates proper servicing procedures, including importance of periodic inspection of shock absorbers on air suspension cars. It is designed to simplify shock absorber installations. United Motors Service Div., 3044 W. Grand Blvd., Detroit 2, Mich.

209 EXTRA PROFITS WITH STEAM CLEANERS—20-page booklet showing several models of Hypressure Jenny steam cleaners, and illustrating many profitable usages of equipment in automotive and allied industries. Also folder on Cooling System Maintenance. Hypressure Jenny Div., Homestead Valve Mfg. Co., P.O. Box 348, Coraopolis, Pa.

211 SERVICE TOOL CATALOG—Illustrates and describes more than 70 tools designed to solve specific problems for the repairman. Each helps to speed up jobs, make operations easier, cut shop costs. Hastings Mfg. Co., Hastings, Mich.

214 THE WHYS AND HOWS OF VOLTAGE REGULATORS—Explains in simple language, every detail of Voltage Regulators—how they work, why they are important, how to adjust and service them. In 16-page handy pocket size edition, with many working drawings to clarify and illustrate the text. Standard Motor Products, Inc., 37-18 Northern Blvd., Long Island City 1, N.Y.

215 LAHER CATALOG PAGE—Both sides feature passenger car overloads and booster springs. Includes specifications and price. Laher Spring & Tire Corp., 300 Madison Ave., Memphis, Tenn.

220 1955 LASCO BRAKE SHOE APPLICATION CATALOG—Complete listing of brake shoe number, F.M.S.I. number, year, make and model of automobile. Available upon request. Laher Spring & Tire Corp., 300 Madison Ave., Memphis, Tenn.

221 NEW REPAIR KIT FOLDER—Gives information on Jack-Pack automatic transmission sealing line (overhaul kits, gasket sets, lip seal sets, rubber sets, sealing rings); Nox-L-Pack automatic nozzles repair kits for Buckeye and OPW nozzles and complete line of Jack-Pack jack repair kits and jack oil. For free copy write: Jack-Pack Mfg. Co., 2115 N. Marianna Ave., Los Angeles 32, Calif.

222 "WHAT PRICE QUALITY"—Read how ignition parts should be made and why. "WHAT PRICE QUALITY" tells the story of the making of quality ignition parts. Written in non-technical language. Standard Motor Products, Inc., 37-18 Northern Blvd., Long Island City 1, N.Y.

225 THE "CAMEL COOLIE" VENTILATED SPRING CUSHION four color catalog page is now available. This newest product is hailed by the industry as a welcome addition to the Camel line. H. B. Egan Mfg. Co., Muskogee, Okla.

226 OIL LEAK DETECTOR—Bulletin shows how hooking up the bearing oil leak detector reveals internal engine conditions, uncovers main, rod or cam bearing wear, plugged oilways, starved bearings, before tearing down the engine. Also describes how the detector checks the completed overhaul and pre-lubricates moving parts before turning over the engine. Illustrates two sizes with maintained oil pressure—one for cars, one for larger truck engines. Federal-Mogul Service, 11031 Shoemaker, Detroit 13, Mich.

227 PROFITABLE ENGINE REPAIR—6 pages entitled "Profit Paks" shows how to get started profitably and at low investment cost in engine repair service;

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how to equip to make 17 essential A.E.A. tests, etc. Sun Electric Corp., Dept. PB, 6331 N. Avondale Ave., Chicago 31, Ill.

228 ENVELOPE STUFFER—Describes in detail the starting fluid, fire extinguisher, spot remover and penetrating oil now available from Spray Products Corp., P.O. Box 584, Camden 1, N.J.

235 METHODS OF TUBELESS TIRE REPAIRING—An authoritative brochure with illustrated steps on the permanent repair of tubeless tires, using either the hot or cold vulcanizing methods is available from H. B. Egan Mfg. Co., P.O. Box 1406, Muskogee, Okla.

242 AUTOMOTIVE LINES—4-page booklet lists all of the Solder Seal chemical tools, giving part numbers, size, case contents, list and dealer prices. Radiator Specialty Co., 1400 W. Independence Blvd., Charlotte 8, N.C.

244 SPARK PLUG INSPECTION CHART—Form No. M-1433—A full color chart that can be tacked or taped up onto walls showing both normal and abnormal appearance of spark plugs plus tips on how to get top performance from spark plugs. The Electric Autolite Co., Toledo, Ohio.

250 FUEL PRESSURE REGULATORS—Informative folder answers such questions as "What is fuel pressure regulator?" "Why do I need one?" "Why isn't it original equipment?" and "Is it guaranteed?" Milemaster, Inc., 1550 E. 74th Place, Chicago 19, Ill.

254 MASTER BRAKE SERVICE GUIDE—Contains fully illustrated, step-by-step instructions for adjusting and relining the twenty different types of hydraulic wheel brakes used on passenger cars and light and medium trucks and buses. World Bestos Div., New Castle, Ind. Attn.: Sales Prom. Mgr.

255 TOOL CATALOG "X"—128 pages gives pictures, descriptions and specifications of the complete line of Snap-On Tools and shop equipment, including the latest electrical and electronic engine testing instruments, wheel aligning and balancing equipment, etc. Snap-On Tools Corp., Kenosha, Wis.

262 OIL FILTER SELLING AIDS—Wix-O-Matic, the guide to extra profits in oil filter service sales. A revolutionary merchandising concept featuring minimum, controlled inventory, guaranteed sales, perpetual stock control, Dial-O-Matic cartridge selector, cartridge installation charge guide, dealer franchise, plus choice of two eye-catching, money making merchandisers—floor cabinet or wall rack. Ask for brochure giving complete details. Wix Corp., Gastonia, N.C.

264 TIRE VALVES, EQUIPMENT AND TOOLS—Complete jobber catalog describes the entire line; giving numbers, description, packaging and weight of each item. Acme Air Appliance Co., Inc., 205 Newman St., Hackensack, N.J.

265 TIRE VALVE WALL CHART—Comparison chart shows application of tubeless tire valves by car name. Also shows the interchange stock numbers of other manufacturers. Acme Air Appliance Co., Inc., 205 Newman St., Hackensack, N.J.

271 AUTOMOTIVE CHEMICALS—8 page catalog gives description of each item in the Permatex line giving uses, parts numbers and sizes. Permatex Co., Inc., 300 Broadway, Huntington Station, New York, N.Y.

273 "HOW TO EARN BIG PROFITS IN BRAKE SERVICE"—Booklet tells how to spot and sell brake service prospects. Shows how a small investment in brake equipment will yield annual return of over 267%. Includes a check list of equipment and accessories necessary for a profitable shop. Ammco Tools, Inc., 2100 Commonwealth Ave., North Chicago, Ill.

274 EQUIPMENT CATALOG—New 24 page catalog includes Tellaliner and Magnetic Gauge units, on and off the car balancers, body frame machines, safety testing equipment, and the tools and gauges for every phase of alignment work. Bear Mfg. Co., Rock Island, Ill.

275 PISTON RING—16-page booklet contains a description of the Modern Power features of Ramco Piston Rings complete with illustrations. Ramsey Corp., P.O. Box 513, St. Louis 66, Mo.

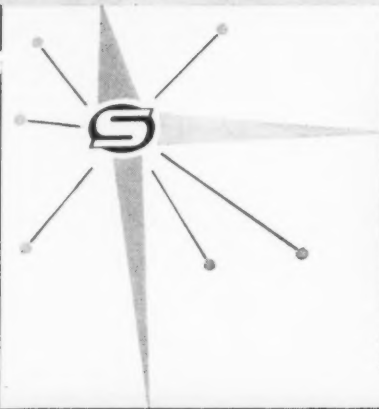
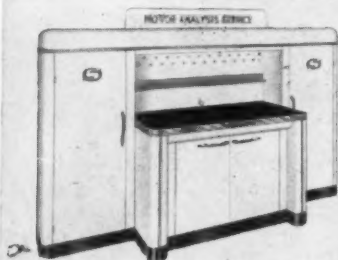
283 CARBURETOR WALL CHART—Three color 17" x 22" trouble shooter chart locates the sources of seven common types of carburetor trouble and gives specific causes and remedies. Hygrade Products Div., Standard Motor Products, Inc., 37-18 Northern Blvd., Long Island City 1, N.Y.

286 LISLE SPECIALTY AUTOMOTIVE TOOLS AND GARAGE CREEPERS—A 16 page tool catalog (#303) featuring Lisle quality Ridge Reamers, Cylinder and Brake Hones, Glaze Breakers, and other specialty automotive tools. This catalog also features Lisle "Jeepers Creepers" and new "Hi-Lo" and "Lo-Boy" creeper seats. Lisle Corp., 888 Main St., Clarinda, Iowa.

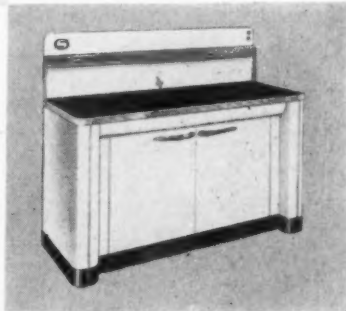
You'll get more PROFITABLE SERVICE SALES

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MODEL 9200
Service Merchandiser



MODEL 9100
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Costello-Kunze Ford
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- Work Benches
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- Tire Racks
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See our complete line NADA show, booth 335, 336, 337—Jan. 28-Feb. 1st.



NEW PRODUCTS AND CATALOGS

600—Steam Cleaner

The "Iron Horse" steam cleaner, announced by Choldun Mfg. Corp., 331 East St., New Haven, Conn., has a dual-piston water pump which reportedly delivers full volume of water at all times, regardless of operating pressure. The pump is said to be practically indestructible because it cannot be



harmed by hard water, lime, rust scale or any kind of chemical, including powder. The cleaners come in 3 models with nine exclusive features, the manufacturer said, and with capacities of 60, 100 and 120 gallons per hour.

Want more info? Use coupon on page 81 and you will get it!

601—Body Filler

"White Star" plastic body filler, introduced by Fibre Glass-Evercoat Co., Inc., Blue Ash Road, Cincinnati 36, O., is formulated to prevent "bleed-through" when used under acrylic lacquers, and, being white, is said to be especially suitable under light finishes.

Supplied with a creme hardener to simplify measuring and mixing, the material reportedly is extra flexible and adhesive. It goes on smoothly, and easily, it was claimed, and sets in approximately 10 minutes, sanding smoothly without pinholes. Product is non-toxic and contains no glass fiber, the manufacturer said. Sanded particles reportedly drop to the floor, leaving virtually no air-borne dust.

Want more info? Use coupon on page 81 and you will get it!

602—Muffler Catalog

Illustrating and describing the latest exhaust system information for domestic passenger cars, imports and trucks, its 75-page "Dealer Muffler and Pipe Catalog No. 20," published by McCord Corp., East Grand Blvd. at Riopelle, Detroit 11, Mich., features clear outline drawings of each exhaust system and

year description at the beginning of each new listing.

Want more info? Use coupon on page 81 and you will get it!

603—Buffer-Sander

A combination polisher-sander-buffer, "Buff 'n Sand," announced by Ram Tool Corp., 411 North Claremont Ave., Chicago 12, Ill., is said to be half the size and weight of similar tools.

Designed to run at 500rpm to avoid high-speed heat and friction on working surfaces, "Model R-900" reportedly is ideal for work on cars, woodwork, etc. Its 110v AC/DC universal air-cooled motor with thrust ball bearings delivers smooth rotary action, the manufacturer said. Individual packages are complete with 7½" O.D. lambswool bonnet and 24 sanding discs.

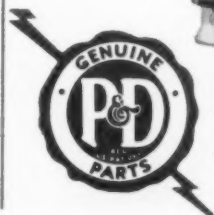
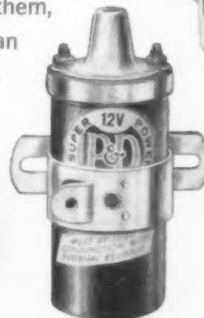
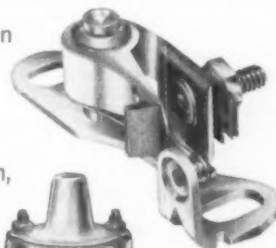
Want more info? Use coupon on page 81 and you will get it!

HERE'S THE PROFIT—AND THE P&D-IZE PROGRAM TO HELP YOU GET IT

For example—just say to a customer "We'll P&D-ize your ignition system and give you a whole year's warranty on the new P&D parts installed."

Wouldn't that sell almost any car owner you know? Sure it would! But that's only part of the big 7-point P&D-ize program developed by your automotive wholesaler and P&D.

Ignition tune-ups are the most often needed and the most profitable part of the service business. Now—with the P&D-ize program—you can get more of them, more easily, more profitably than ever. Ask your P&D wholesaler or write us now!



P&D MANUFACTURING CO., INC.
STARTING - LIGHTING - IGNITION

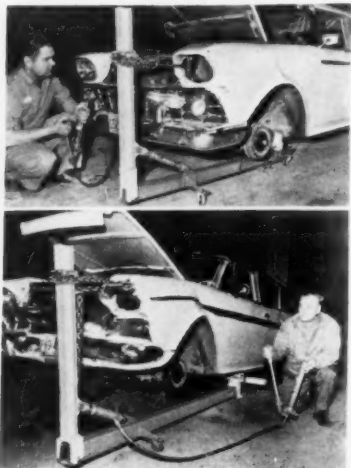
19-02 STEINWAY ST., LONG ISLAND CITY 5, N. Y.

Export Sales: Borg Warner International, 36 So. Wabash Ave., Chicago 3, Ill.

604—Body Repair Units

Two dozers designed especially for handling a wide variety of automobile sheet metal pulling, announced by Blackhawk Automotive Division, 5325 W. Rogers St., Milwaukee 46, Wis., are the "EK-7 Bantam-Dozer" (top) and the "EK-20 Power-Dozer" (bottom).

Weighing 116 lbs., the "EK-7" comes complete with 4' and 6' chains, I-bolt and pull plate and a 1 3/4" pull clamp with an exclusive O-ring. Featuring a 6' horizontal beam and an adjustable



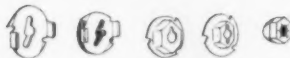
anchor post, it is said to be ideal for body, fender and all sheet metal pulls. Pull can be adjusted anywhere along the vertical beam, it was claimed, and heavy-duty swivel casters permit rolling unit easily to the job.

The "EK-20" weighs 209 lbs., has dual swivel casters and is equipped with 4' and 6' chains, body anchor clamps, I-bolt and pull plate and 1 3/4" pull clamp with O-ring. Seven tons of pulling power and an 8' beam are key features of the larger dozer, which reportedly is capable of handling body sections and unitized construction to enable operator to repair every type of reinforced sheet metal damage. A self-locking, adjustable anchor post speeds hookups.

Want more info? Use coupon on page 81 and you will get it!

605—Molding Nut Tool

Reversible head of "K-D 442" molding nut tool, introduced by K-D Tools, Lancaster, Pa., removes and replaces "thread-cutting nuts" and "self-threading hex nuts" as illustrated.



Short, compact design gets into tight places and tool can be used with standard 1/4" extension. It is 3 3/8" over-all, correctly tempered, rustproofed and features a plastic handle.

Want more info? Use coupon on page 81 and you will get it!

606—Marker Light

"No. 96" aluminum armored clearance marker light, announced by R. E. Dietz Co., 225 Wilkinson St., Syracuse 1, N.Y., incorporates two 2cp triple-life bulbs rated at 1,500 hours.

Heavy-duty bulb filaments are double-supported against shock and vibration for longer bulb life, the manufacturer said. Body is cast with a center bar which separates a single acrylic lens into separate lens chamber for each bulb. Steel back plate is corrosion-resistant and designed for full flush mounting with four mounting screws.

Want more info? Use coupon on page 81 and you will get it!

607—Choke Stove

No filter clog is claimed for a choke stove, announced by Better Parts Specialties, 2601 San Fernando Road, Los Angeles 65, Calif., which is self-filtering to clean air automatically, thus reportedly supplying a greater volume of heat to operate automatic chokes under all weather or driving conditions.

Easy to install, choke stove requires no taping or drilling. It eliminates sticking choke, wasted gas, plugged air passages and complete carburetor failure, according to the manufacturer. Custom-fit and universal models are available for all cars.

Want more info? Use coupon on page 81 and you will get it!

MOOG ANNOUNCES COMPLETE

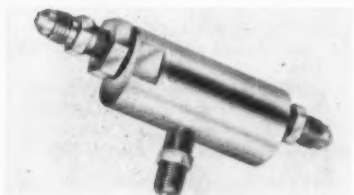
Power Steering Repair

From the Leader in Under-Car Parts Comes the Most Complete New Line of Power Steering Parts!



608—Safety Brake Device

A "spare brake" which starts to function when any half of the hydraulic brake system fails, introduced by Alex Mfg. Corp., Building 196, N. Y. International Airport, Jamaica 30, N. Y.,



converts the brake system into a dual one, taking over automatically and safely when brake failure caused by leakage in hose, wheel cylinder cups or brake tubing occurs.

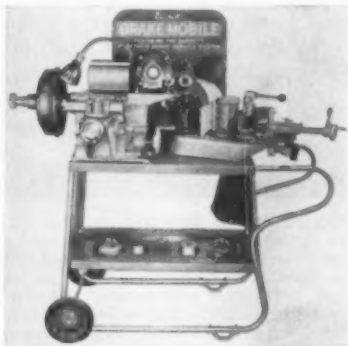
The front part of the brake system continues to function when the rear part fails and vice versa. Braking power is maintained on the 2 remaining wheels not affected by the brake failure. The unit is connected in-line of any hydraulic system, actually becoming part of the master cylinder, it was claimed, with absolute control over the lines leading to both rear and front wheels. Device will operate in all leakage conditions caused by ruptures in the brake hoses and tubing, as well as wheel cylinder cups, according to

the manufacturer. It reportedly will also operate in all conditions of brake fluid expansion. Unit is self-contained and does not require maintenance. Installation time is about 30 minutes, the manufacturer said.

Want more info? Use coupon on page 81 and you will get it!

609—Portable Brake Shop

Especially designed for all shops offering brake shoe and drum service but operating with limited work space, "B-4 Brake-Mobile," announced by Barrett Equipment Co., 2101 Cass Ave., St. Louis 8, Mo., is a low-priced portable brake service shop with floor dimensions of only 36" by 22", said to be capable of handling all domestic and most foreign car drums.



Equipped with the "B-400 Drum-Dokter" brake drum lathe, "B-74" cylindrical bench-type brake shoe grinder, a brake drum "Check-R" and a floating drum attachment, the mobile unit also includes a shoe arc gauge for checking the arc on ground shoes and a positive check on grinder calibration.

Want more info? Use coupon on page 81 and you will get it!

610—Oil Seal Catalog

Arranged in alphabetical order and containing a condensed listing of oil seals for all popular domestic and imported passenger cars, commercial vehicles and light trucks, its 32-page oil seal catalog "No. 14," published by McCord Corp., East Grand Blvd. at Riopelle, Detroit 11, Mich., illustrates and describes 3 different sized oil seal cabinets available to independent garages, service centers and gasoline stations.

Want more info? Use coupon on page 81 and you will get it!

611—Alignment Equipment

To enable even a one-man service shop to operate wheel alignment service, the "Model WJ-125" "on-the-floor" wheel alignment outfit, introduced by Weaver Mfg. Division, Dura Corp., 2100 South Ninth St., Springfield, Ill., reportedly includes all the basic gauges necessary.

Equipment consists of two 3-way alignment gauges, one "Tru-Way" toe gauge, one pair of turning radius gauges and one portable wheel alignment tester.

Want more info? Use coupon on page 81 and you will get it!

Kits and Hose Assemblies



Here's everything you need to repair noisy, vibrating power steering mechanisms... packaged in fast-moving kits for quick, easy, profitable installations. Available now from your MOOG Jobber... with colorful, hard-selling merchandising banners.



MOOG INDUSTRIES, INC.
St. Louis 33, Missouri

MOOG MEANS MORE UNDER-CAR BUSINESS

3 out of 4 New Cars have Power Steering

Power steering seals, gaskets, washers, retaining rings, hoses, etc. wear out *fast*. Cash in on this big market with MOOG Power Steering Repair Kits and Hose Assemblies!

612—Battery Charger

Any battery from one volt up to 24 volts reportedly can be charged with "Sati-Lite #1" battery charger, announced by Electric Service Systems, Inc., 1330 Quincy St., N.E., Minneapolis 13, Minn., which does not have circuit breakers, fuses or switches.

A light indicates when the controller is improperly hooked up or battery is



shorted out so that battery clips may be changed or reversed. Unit is said to be fool-proof, easy to hook up and easy to handle. Its dimensions are 5"x5"x4" and it features a two-toned baked-on enamel finish. As long as battery water level is properly maintained, the manufacturer said, unit can be hooked up to battery and left on almost indefinitely.

Want more info? Use coupon on page 81 and you will get it!

613—Brake Bleeder Wrench

"No. 270" master brake bleeder wrench that works interchangeably on compact or conventional cars and trucks, introduced by Herbrand Tools, Herbrand Division, The Bingham-Herbrand Corp., Fremont, O., is said to be the only wrench of its type on the market that can be used on all 3 types of vehicles.

A 1/4" hex socket opening on one end covers compact car bleeder valves, while a 3/8" hex on the other end is for conventional cars and trucks. The tool also has vent holes in each socket end which permit bleeding the line without removing the wrench from the bleeder valve.

Want more info? Use coupon on page 81 and you will get it!

614—Transmission Bands

Lined bands for Cruis-O-Matic, Dynaflo, Ford-O-Matic, Hydramatic, Merc-O-Matic, Powerflite, Powerglide, Teletouch and Turbo-Drive automatic transmissions have been announced by the Raybestos Division of Raybestos-Manhattan, Inc., P.O. Box 1021, Bridgeport, Conn.

Lining on the bands is the same as the lining supplied to original equipment manufacturers, according to the company. Seven different proving-ground-tested linings, properly bonded to new steel cores, reportedly insure optimum service in each type transmission.

Want more info? Use coupon on page 81 and you will get it!

615—Fuel Pump Catalog

A 40-page catalog of replacement fuel pumps for cars, trucks, buses, tractors, etc., published by Wells Mfg. Corp., Fond du Lac, Wis., is indexed, cross-referenced and contains complete application and interchangeability data. Make and model of car, truck, etc., are alphabetically arranged in tables, giving the original fuel pump series and stock number. Cross-reference sections carry Capac fuel pumps by number and indicate engines for which they have been designed.

Want more info? Use coupon on page 81 and you will get it!

616—Coil Block

For easy R & R of shims upper control arms on Falcons and Comets, the "FC-1" coil block, announced by Arn-Wood Co., 554 Santa Fe Drive, Denver, Colo., reportedly keeps coil compressed and pulls upper inner shaft away from bracket as shim pack bolts are loosened.



Place block in position, as illustrated. Raise frame and guide top end of "FC-1" in opening of control arms. Block is said to work well when replacing knee action parts under upper control arms, or may be used in pairs for replacing parts both sides or when replacing front frame cross members.

Want more info? Use coupon on page 81 and you will get it!

617—Torsion Bars

Pre-set torsion bars for all Chrysler products beginning with 1957 models, announced by McQuay-Norris Mfg. Co., 2320 Marconi Ave., St. Louis 10, Mo., reportedly are precision-made from chrome-manganese alloy steel, heat-treated and shot-peened for maximum strength.

Bars are pre-set to prevent settle or sag and are identified for right- and left-hand installation. All are enameled to prevent corrosion.

Want more info? Use coupon on page 81 and you will get it!

618—Air Hammers

Styled for muffler, body and frame work, involving cutting, slitting, ripping, scraping, shearing or punching, two air hammers introduced by Thor Power Tool Co., 175 N. State St., Aurora, Ill., are a short-stroke, heavy-duty model and a long-stroke, extra heavy-

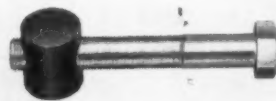
duty model, each available individually or in kits.

The "HM3P" weighs 3 lbs., 6 ozs., is 7 1/2" long and delivers 3,360 blows per minute. The smaller "HM1P" weighs 2 1/2 lbs., is 5 1/16" long and operates at 5,500 blows per minute. Both consume 13cfm of air and have 0.401" chisel shank diameter. Hose thread for both is 1/4" pipe thread and recommended hose is 5/16".

Want more info? Use coupon on page 81 and you will get it!

619—Torsion Bar Assembly

"TB 1" torsion bar bolt and swivel assembly, announced by Dorman Products Inc., 5757 Mariemont Ave., Cincinnati 27, O., reportedly is a necessary replacement on most torsion bar repair and adjustment jobs for 1957-60 Chryslers, De Sotos, Dodges and Plymouths.



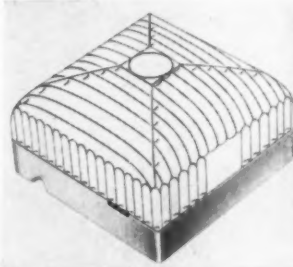
Assembly includes plated bolt of high-strength 1041 steel and barrel nut and replaces Chrysler part Nos. 1825181 bolt, 1825185 swivel and 2196768 assembly.

Want more info? Use coupon on page 81 and you will get it!

620—Clearance Lights

One of several clearance marker and identification lights, announced by K-D Lamp Co., 1910 Elm St., Cincinnati 10, O., the "KDX526" (illustrated) features a die-cast rustless base which provides for inside and outside wiring.

Colorfast, non-craze red and amber lenses reportedly weather well. Stand-



ard-type bulbs are designed for long life. Easily installed with only 2 mounting holes, marker mounts flush, leaving no sockets to protrude. Lens prys off and snaps on. With 120° light spread, units are said to exceed SAE specifications and are marked and certified as meeting ICC requirements.

Want more info? Use coupon on page 81 and you will get it!

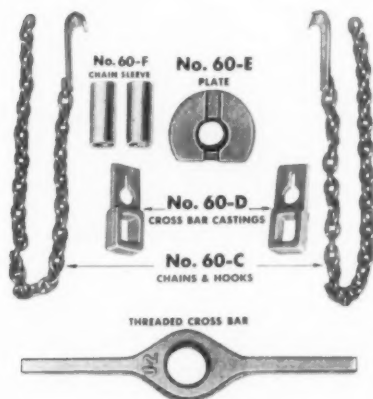
621—Replacement Panels

For producing a repair with hours of work saved, headlight replacement panels for 1955 Chevrolets have been announced by Schofield Mfg. Co., 1140-11 E. 222nd St., Cleveland 17, O.

Want more info? Use coupon on page 81 and you will get it!

622—Coil Compressor

On late-model Chevrolets and Oldsmobiles, use of the "No. 60-Cou" coil compressor, introduced by Arn-Wood Co., 554 Santa Fe Drive, Denver 4, Colo., is said to make coil spacer installation easy by pulling the coil down from the top seat to allow ample room to install the spacer.



The lower coil plate of the tool fits flat against bottom of the lower control arm and is recessed to accommodate lower shock end and shock cross bar stud. It is not necessary to disconnect the shock absorber.

Want more info? Use coupon on page 81 and you will get it!

623—Valve Stem Cap

To prevent valve stem swallowing during run-flats in dual-wheel operation, "Glo-Cap" heavy-duty valve stem cap, introduced by Allied Chemical Corp., 40 Rector St., New York 6, N.Y., reportedly also serves as a heavy-duty valve cap to prevent damage to valve cores.

Made of fluorescent nylon, the cap screws down tight on the valve stem and holds it to prevent its pulling into the tire. Completely reusable, the caps can be screwed on or off with the fingers. For hard-to-get-to stems, a $\frac{1}{2}$ " deep socket wrench can be used to screw them on or off.

Want more info? Use coupon on page 81 and you will get it!

624—Compressor

Designed as a self-contained "off-road" package, "Model W6400BGC" heavy-duty air compressor for truck-mounted applications, announced by The Wayne Pump Co., Fort Wayne, Ind., is a gas-engine-driven unit which combines high capacity with small weight and size to fit tight truck dimensional and weight requirements.

Rated at 175psi, unit delivers 32.5cfm of air when operating at full ratings, it was claimed. The engine drive is V-belted to the compressor through an oil-type clutch that reportedly permits warm-up operation before compressor load is applied. The compressor unit is of a 2-stage, 4-cylinder air-cooled design assembly.

Want more info? Use coupon on page 81 and you will get it!

QUALITY SAVES YOU MONEY!



Of course **Claw-Plast** Plastic Putty Fillers do a superior job for the customer . . . build your reputation and your business. But remember too, that high-quality **Claw-Plast** is **easier to work with** . . . saves costly labor time. Best of all, **Claw-Plast** Fillers are economical to begin with. Ask your jobber for a can.

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LOW-DUST SEMIFLEX

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GREY COLOR



BLACK COLOR

"QUALITY JOB" . . . TIME-AVING FEATURES

- Super Smooth!
- No Pinholes!
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- No Blisters!
- Super Adhesion!
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TIME SAVERS

To Find Slow Leak In Tire Tubes

TO FIND a slow pressure leak in a tire tube, dismount tire and pour a bottle of ink inside the tube. Re-mount with pressure for half a day.

Remove and look for ink stains.
—G. C. Hankins, Jr., G. C. Hankins Motor Company (Chevrolet-Corvair), Raleigh, Mississippi.

Making Small Wire Brush At No Extra Cost

A VERY useful small wire brush for working in close quarters can be made quickly at no extra cost from a segment of a circular scratch wheel such as those used on small power grinders.

Even though such a wheel is



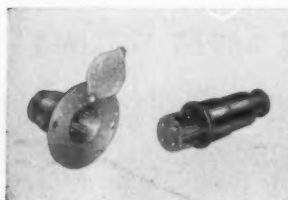
worn down and perhaps frayed, it will still be suitable for making several small hand brushes like the one illustrated. For the handle, slot one end of a short length of wooden round stock, insert brush segment and fasten with a small bolt. If desired, the other end may be fitted with a small, sharpened angle

bracket for use as a scraper. This tool is fine for scraping carbon or removing old paint from restricted areas.—Glen F. Stillwell, 340 Ninth Street, Manhattan Beach, California.

Soldering Wire Splice Without an Iron

IF YOU'RE on the job away from your tools and find you've forgotten your soldering iron, don't weep. It may come as a surprise—even to experts—that a skillful job of soldering a wire splice can be done with a match flame.

All that is needed is a bit of wire solder and there is usually some available any time at any place. Twist an inch length of the solder around the splice, light a match and



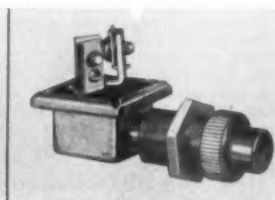
Polarized Four-Pole Trailer Connector Assembly for Passenger Cars.



Underwriters' Laboratory Approved Toggle Switches With or Without Wire Leads.



Complete Electrical Control Switch Panel for Electric Starting Requirements.



Moisture and Dustproof Momentary Starter or Choke Switch.

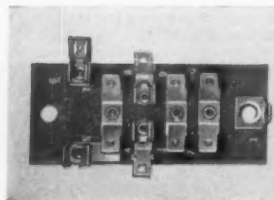
COLE-HERSEE



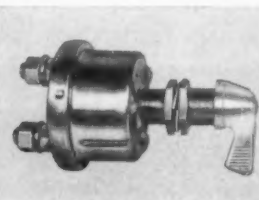
COLE-HERSEE CO.
Over 40 Years of Consistently Better Products
20 OLD COLONY AVENUE, BOSTON 27, MASS.

Quality AUTOMOTIVE and TRUCK ELECTRICAL PRODUCTS

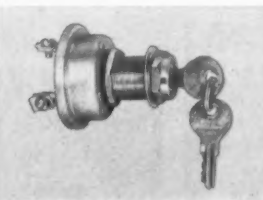
Terminal and Fuse Blocks With Fast Slip-On Type Terminals.



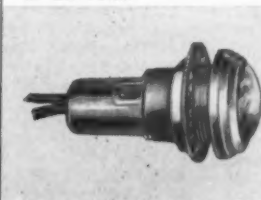
Battery Master Disconnect Switches. Single and Double-Pole Versions.



Combination Ignition Starter Switches With Coded Tumbler Lock and Keys.



Pilot Lamps — Gasketed, Waterproof With Clear or Red Faceted Lenses. Single or Double Contact. 6, 12 or 28 volts.

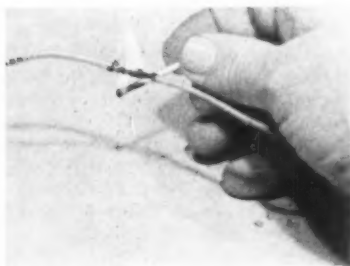


GOT A GOOD

\$7

IDEA?

will be paid for every time - saver or shop short - cut accepted for publication in this section. A photo or rough sketch will make your idea more valuable. Only original items, not previously published, offered for our exclusive use, can be considered. Send them to: Southern Automotive Journal, 806 Peachtree St., N.E., Atlanta 8, Ga. Rejections cannot be returned.



hold it under the splice. In seconds the solder will melt and fuse to the bare wire. In some cases this device beats a soldering iron or gun because it can be used where no power outlet is handy. Try it and you'll be surprised at the good results!—Glen F. Stillwell, 340 Ninth Street, Manhattan Beach, California.

Repairing Worn Threads In White Metal

WHEN threads wear or strip in white metal—as in some carburetor bodies—a fast repair sometimes can be made by hacksawing a slot in the holding screws, then shaping a small piece of metal into a wedge and placing it in the slot.

Return the screw. When the wedge hits bottom of the hole it spreads the sawed part of the screw apart, making it cut a new and deeper thread in the blind hole.—Stan Clark, Stanley Clark Service, Box 2162, East Bradenton, Florida.

To Lock Bushings In Worn Housings

WHERE steel bushing housings are worn or bushing turns in housing, use an electric welder to scratch inside bushing housing,

leaving weld marks to lock bushing when it is driven in.—G. C. Hankins, Jr., G. C. Hankins Motor Company (Chevrolet-Corvair), Raleigh, Mississippi.

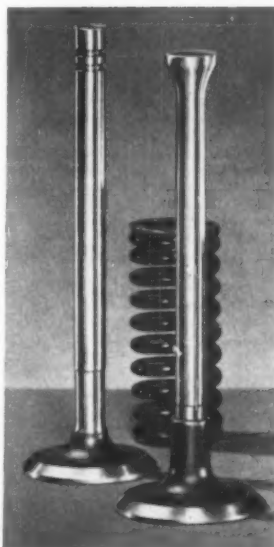
To Support Armatures Without Centerholes

MANY electric motor and generator armatures are now made without shaft centerholes and the re-turning of commutators on them can present a problem. I have made very successful use of a simple set-



up on a bench engine lathe to solve this problem.

I fitted a small universal lathe



"YOU SAY YOU HEARD WHAT SOUNDED LIKE A DULL THUD?"

Keep that satisfied sparkle in your customers' smile—install

Manley airchrome valves and springs

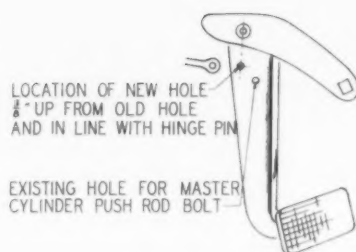
Manley Valve Corporation, 15th St. & Fairmount Ave., Philadelphia 30, Pa. Supplier to leading original equipment manufacturers. District Sales Representatives: Hirsig-Brantley Co., Jacksonville; J. S. Connell Co., Dallas.

chuck with a taper shank back plate to fit the tail spindle of the lathe. A ball bearing was then gripped in the jaws of this chuck. Various sizes of steel sleeve bushings, turned to a tight fit in the inner race of the bearing, are used to seat the shaft end of the armatures in this free-running ball bearing. Each of these sleeves is carefully bored to fit the various shaft diameters commonly encountered in our work. The opposite end of the armature shaft is chucked in the conventional way at the head spin-

dle end of the lathe. Care must be taken in making the spacer sleeves. To assure concentricity, it is best to bore them first, then mount them on a mandrel between centers to turn the O.D. to size.—H. J. Gerber, 1604 W. 8th, Stillwater, Oklahoma.

Correcting Hard Braking On Overloaded Ford

A 1957 Ford in our territory is overloaded many times and the driver complained that at these



times the car was difficult to stop; plenty of pedal but too much effort was required to stop.

After some thought, I made an experiment (see illustration):

Remove the brake swinging pedal. Locate and center-punch a new hole for the master cylinder eccentric bolt approximately $\frac{3}{8}$ " to $\frac{1}{2}$ " up from its original location and almost in line with the pedal hinge pin hole. Drill out to $\frac{3}{8}$ " and re-install the pedal and pushrod bolt. Pushrod may require a slight bend in order to line up with the new hole.

This method gives more lever power and the driver said it really did the job!—Fred H. Findley, Service Manager, Reform Motor Company, Reform, Alabama.

HE COULDN'T SELL IT!

A garage operator in Kentucky cannot lawfully sell a vehicle for storage charges, even though state law gives him a lien on that vehicle for such charges.

Albert Hisle of Frankfort had a lien for towing and storage charges on a car owned by John Mastin, Jr. The vehicle did not have a motor and Hisle kept it in his garage for Mastin for six months. Finally, to satisfy storage charges, Hisle sold the car for \$50.

Mastin brought a damage suit for alleged conversion of his car by Hisle, but circuit court granted Hisle a summary judgment. The court of appeals reversed that ruling because, although Hisle contended Mastin abandoned the vehicle, proof must be heard on that contention and it could not be decided on its merits on the basis of Hisle's motion for a summary judgment.

Of course, this was an interpretation of Kentucky law and would not necessarily be true in other states where statutes might vary.

Rockett Dies in North Carolina

Harvey J. Rockett of Rockett Motors, Inc., Old Fort, N. C., died recently.

All roads
lead west
in February...
to the
BIG ONE
in '61!



The 1961
**International
Automotive
Service
Industries
Show**

presented by **PACIFIC
AUTOMOTIVE SHOW**

February 16, 17, 18, 19
**LOS ANGELES MEMORIAL
SPORTS ARENA
and Portico Annex**

YOU are invited to be a guest of automotive jobbers from our 13 Western States, Western Canada and Mexico...

For profits to be won, '61's the BIG ONE—the most important Automotive Show of the year for service trades in the Western area. More than 1100 manufacturers' booths will be filled with the very latest accessories, parts, tools, supplies and equipment for the demonstration of new service and repair techniques. At 6 P.M., February 17, the exhibition will be opened to thousands of automotive retail trades personnel. Mark your calendar now—attend the 1961 I.A.S.I.S. presented by PACIFIC AUTOMOTIVE SHOW February 17-18-19 in Los Angeles as the guest of jobbers in...

ALASKA • ALBERTA • ARIZONA • BRITISH COLUMBIA
CALIFORNIA • COLORADO • HAWAII • IDAHO
MEXICO • MONTANA • NEVADA • NEW MEXICO
OREGON • UTAH • WASHINGTON • WYOMING

PACIFIC AUTOMOTIVE SHOW
714 W. Olympic Blvd., Rooms 504-505, Los Angeles, Calif.

NADA Manager Tells Virginians: Hard Battle Looms on Excise Tax

"A HARD battle lies ahead" in bringing about a reduction of the ten per cent general excise tax, James C. Moore, executive vice president of the National Automobile Dealers Association, told the recent convention of the Automotive Trade Association of Virginia at Roanoke.

Terming the tax "discriminatory to our business," Moore said he thought dealers "would be willing to have the tax lowered to five per cent and locked into the federal interstate highway program until 1972." He indicated, however, that chances of getting the tax reduced were slim.

Other speakers on the program included Warren King, automobile merchandising editor for *Life* magazine; W. Heartsill Wilson, assistant general sales manager of Plymouth-De Soto-Valiant, and William C. "Bill" Herbert, editor of *SOUTHERN AUTOMOTIVE JOURNAL*.

Joe L. Hill of Roanoke was re-elected president. Other officers re-named are H. Carter Myers, Jr., of Petersburg, first vice president; Burton Kephart of Arlington, second vice president; C. B. Gifford of Norfolk, third vice president, and G. Ed DuBose of Richmond, secretary-treasurer.

Directors include P. Warren Spratley of Hampton, Mike Suttle of Newport News, Philip Farrand of Norfolk, W. O. Lewis of Portsmouth, W. B. Leake of Richmond, N. Starr Beaton of Franklin, Hubert S. White of Galax, John C. Swanson of Danville, Stanley Nichols of Covington, John P. Hughes of Lynchburg, O. L. Painter of Strasburg, E. T. Kramer of Harrisonburg, M. E. Tremain of Charlottesville, J. A. Mit-

chell of Culpeper, J. F. Killinger of Marion, J. J. Stump, Jr., of Norton, Erle R. Kirby of Arlington, C. T. Lindsay of Alexandria, J. R. Chapman of Richmond, A. H. Shackelford of Roanoke and Paul R. Lauritzen of Richmond.

Charles B. McFee, Jr., is the veteran executive vice president.

NADA Manager Moore



Buick Special Gets 15" Wheels

At the request of customers in rural areas who require a car with greater ground clearance, Buick Motor Division of General Motors has made 15" wheels available as optional equipment on its new Special series, Edward D. Rollert, general manager of Buick, announced. Standard size wheels on the Special are 13" in diameter and the increased wheel size will make that car's ground clearance the same as the regular Buick. Rollert said.

JUST WHAT YOU'VE NEEDED!

MINITANK

for Low-Cost Professional Cleaning



You don't have to invest several hundred dollars in expensive equipment . . . GUNK's got the perfect new dip-process parts cleaning tank for all service shops. The Minitank plus GUNK Super Concentrate (mixed with 9 parts of kerosene) provides fast, safe, emulsion-type parts cleaning.

The Minitank is complete with solvent-protecting cover, sturdy parts basket for easy dipping with heavy duty handles. Durable baked enamel finish on tank, hose threaded drain valve and large free-rolling casters.

SEE YOUR GUNK JOBBER FOR SPECIAL "MINITANK" DEAL!

You can easily boost shop efficiency on small parts cleaning with this special GUNK "Minitank" deal. By ordering Special Number 60-GTB from your jobber, you get:

- One—10 gallon "Minitank" with parts basket
- One—Free long handle 100% nylon cleaning brush
- One—Free gallon can of genuine GUNK Super Concentrate

—all included in this terrific 3-Way deal at special introductory price. Order NOW from your GUNK jobber!

\$32⁵⁰



GUNK CHICAGO CO., River Forest, Illinois

serving the Midwest and Southwest

RADIATOR SPECIALTY CO., Charlotte, No. Carolina

serving the East, Southeast and far West



Tool Tips for the Mechanic

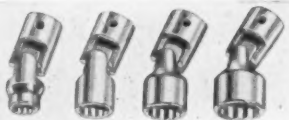
Cruisematic Transmission Service

A new use for the S-8690 Hydraulic Tappet Tool is pulling the No. 32 kickdown control valve in the 1958 Cruisematic transmission. This handy tool was originally designed to remove sticky tappets. Full details on page 72 of Catalog X.

Valiant-Chrysler-Chevy Truck Suspension

The SNAP-ON® WAC-2 Suspension Height Level Gauge, made for Chrysler line, can also be used to adjust torsion bar suspension on 1960 Valiants and Chevy trucks. On the trucks, the small non-adjustable end seats itself better when inserted directly over the grease fitting close to the wheel. The other end should be attached to the large round bar at the other end of the suspension. See your copy of Catalog X — page 80.

NEW TOOL



Snap-on 104-TMU

Double Hex Flexocket Set

With all the emphasis on compactness these days, mechanics will welcome this new $\frac{1}{4}$ " square drive SNAP-ON set of jointed sockets. They're made to work in the awkward or obstructed spaces ordinary socket wrenches can't maneuver in. You use them with your regular $\frac{1}{4}$ " drive SNAP-ON handles and extensions — but these sockets have a universal joint that lets you twist and turn them to work corners and odd angles. You'll use them on dozens of jobs.

Set consists of four sockets — $\frac{1}{4}$ " $\frac{5}{16}$ " and $\frac{3}{8}$ ". Other details on page 21 of your new Catalog X.

Draining '58 Ford Engine Blocks

Next time you reach for the hard-to-get-at drain plugs in the '58 Ford, reach for the SNAP-ON B-1459 Brake Wrench. Two $\frac{3}{8}$ " single-square openings — one at a 45° angle, the other straight with the handle. Page 85 of Catalog X.

Chevy Vacuum Adjustments

Snap-on LTA-2428 wrench is another double-duty special. On tappet work you'll appreciate its slim design and light weight. Then you'll find its $\frac{3}{4}$ " and $\frac{7}{8}$ " wrench sizes ideal for adjusting the vacuum modulator on 1957-58-59 Chevis. See page 55 of SNAP-ON X.

Your SNAP-ON man is handing out copies of brand new Catalog X these days. He's got a copy for you. It's free — and will help bring you up to date on SNAP-ON tools — finest you can buy. Or write and we'll mail you your copy.

Snap-on Tools Corporation

8050-L 28th Avenue • Kenosha, Wisconsin



Named to key positions by directors of Ford Motor Co. last month were Charles R. Beacham (left), 60, vice president-marketing; James O. Wright (center), 48, vice president and group executive—car and truck divisions, and Lee A. Iacocca (right), 36, vice president and general manager, Ford Division, succeeding Wright. Beacham and Wright are Southerners.

Two Southerners Climb With Ford Motor Co.

Two Southerners moved a notch higher with Ford Motor Co. last month.

James O. Wright, who was born at Norfolk, Va., in 1912 and graduated "with high honors" in 1934 from North Carolina State College, was elevated to vice president and group executive—car and truck divisions, replacing Robert S. McNamara, who became president as Henry Ford II relinquished the presidency and remained board chairman and chief executive officer.

Charles R. Beacham, who was born 60 years ago at McRae, Ga., and has told SAJ editors he looks forward to the time when he'll retire in the Southeast—probably around Jacksonville, Fla., was appointed vice president—marketing. This alumnus of Georgia Tech had been vice president and former assistant general manager of Ford Division.

He started with Ford in 1926 at Jacksonville as a traveling representative.

L. A. Iacocca, 36, a Pennsylvanian who had been Ford's vehicle marketing manager and earlier district sales manager at Washington, D.C., was named vice president and general manager of Ford Division, succeeding Wright.

McNamara, 44, is the fifth president of Ford Motor Co. since its formation in 1903. He is a native of San Francisco and graduate of the University of California and Harvard Graduate School of Business Administration. At one time he was a Harvard professor and has been residing at Ann Arbor, Mich., where he has preferred the atmosphere surrounding the University of Michigan while commuting to Dearborn.

Henry Ford is the grandson of the founder of the company. He is one of the three brothers in the company who are sons of the late Edsel Ford.

Robert S. McNamara (left), 44, one-time Harvard professor, is the new president of Ford Motor Co., moving into that spot as Henry Ford II (right) yielded the presidency and continued as chairman of the board.



Officers of the Automotive Trade Association of Virginia are (l. to r.): seated, Burton Kephart of Arlington Motor Co., Inc., Arlington, second vice president; Joe L. Hill of Valley Cadillac-Oldsmobile, Inc., president; H. Carter Myers, Jr., of Petersburg Motor Co., Petersburg, first vice president; standing, G. E. DuBose of DuBose Buick, Inc., Richmond, secretary-treasurer; Charles E. McFee, Jr., executive vice president and general manager, and C. E. Gifford of Green-Gifford Motor Corp., Norfolk, third vice president. The association has changed its annual convention dates from fall to spring. Its next meeting will be held April 23-25 at the John Marshall Hotel in Richmond. For a report on the recent convention held at Roanoke, turn to page 93.



Ceramic-Coated Exhausts May Curb Costs

MORE than a half billion dollars a year in replacement costs could be saved by U. S. motorists by the new ceramic exhaust systems, according to E. W. Bernitt, vice president of American Motors automotive operations.

Industry authorities estimate that roundly 25,000,000 mufflers and tailpipes are replaced every year at a cost in excess of half a billion dollars, he said.

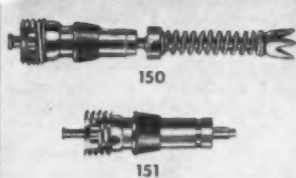
Bernitt showed newsmen the process for ceramic-coating 1961 Rambler tailpipes and mufflers, developed in a cooperative program with American Motors, Walker Mfg. Co. and The Bettinger Corp., whose Toledo plant coats the mufflers and tailpipes. Newsmen also were given a graphic demonstration of how engine acids destroy conventional car mufflers while having no effect on the ceramic-armored mufflers.

"Our adoption of the new exhaust system," Bernitt said, "is part of our effort to tackle the biggest costs of motor vehicle operation and maintenance. So effective is this system in resisting corrosion and rust that we are guaranteeing the tailpipe and muffler of every 1961 Rambler for the life of the car as long as it is in the hands of the original owner."

Bernitt said that independent tests indicate that conventional mufflers have an average lifetime of 18,000 miles, while an aluminized muffler—which also was pioneered by American Motors but replaced by the new unit—lasts an average of 34,000 miles.

Ceramics have been used for some years in coating exhaust systems of airplanes, where heat build-up reaches exceptionally high temperatures.

730,000,000 ACME Cores & Caps HAVE BEEN SOLD ... SINCE 1915



VALVE CORES

Our specifications and features include:

- Swivel construction
- Vulcanized rubber gasket
- All metal parts plated
- Special fatigue-resistant stainless steel spring

VALVE CAPS

All ACME Valve Caps (except No. 310, which is plastic) are precision machined from solid brass, which results in a heavier, sturdier, longer lasting valve cap. Threads are deeper and more precise. Therefore, the seal is more air tight with less likelihood of lost caps due to vibration. ACME Valve Caps have been the choice of expert mechanics the world over since 1915.



ACME
for Accuracy
SINCE 1915

Write Today for our complete new catalog
ACME AIR APPLIANCE CO., INC.

205 NEWMAN STREET

HACKENSACK, N. J.



HOW GOOD ARE YOU?

D-3

Can you transform the word "hole" into a building with 2 pencil lines?

hole

Attach the solution to your business card or letterhead and mail to ACME. If you're right, we'll send you a "Genius Award" for your accomplishment!

Relax each month with the ACME "Problem Corner"

Watch Those Brake Drums!

LEADERS in the service market are seeking to minimize the practice by some motorists of reusing a brake drum that has been worn or indiscriminately machined beyond the recommended .060" dimension.

Latest effort toward this goal for greater safety is the following statement issued by H. C. "Buck" Buchanan of Carolina Rim & Wheel Co., Charlotte, N.C.:

Many vital parts of an automobile are never seen by the automobile motorist; he can't see them and as a result, these parts are not serviced unless called to his attention. Excessive tire wear is noticed, and a wheel alignment is made. A rattle here and there is often tightened, but what about the muffler, ignition points, *brakes!*

Terrific emphasis has been placed on brake lining and brake parts. Brake lining manufacturers conduct clinics and spend untold thousands of dollars educating automotive mechanics on brake adjustments. Very seldom is mentioned the most important part of the brake system . . . the brake drum. Without it there would be no need for brake lining; without it brake drum lathes would stand idle, or would have never been sold. So, what about the brake drum? In recent years several individuals have waged a single-

handed campaign to educate the car dealers, independent garages and brake shops on the important role that the brake drum plays in the brake system.

The National Wheel and Rim Association, through the cooperation of its distributor members, has launched a program against the reuse of brake drums that have been worn or machined beyond .060". The efforts of the National Wheel and Rim Association resulted in an endorsement of the Automobile Manufacturers Association in establishing the .060" dimension beyond which brake drums should be worn or machined and still be considered safe for reuse.

"It is an engineering fact that by reducing the thickness of the brake drum ring or flange to 90% of its original thickness, the strength of ability to withstand pressure is automatically reduced to 80% of its original strength. Furthermore, by reducing to 80% of original thickness, reduces the drum strength to 64%."

Here's a thought: The average car owner assumes that if his car stops at speeds from slow to intermediate range, it will also stop as quickly, and with the same pressure, when called upon for "panic" or high-speed stops. This is sheer fallacy.

More heat and more load at higher speeds call for a heavy brake drum to withstand the added pressure. If the drum is not capable of such pressures, brake "fade" will occur, requiring a greater distance to slow or stop the vehicle.

How many times have you heard the expression, "These brake linings are no good . . . they fade." Would it not be possible that the brake drums were worn or machined too thin? Think it over.

Quite recently the states of Pennsylvania and New York adopted the .060" limit in their inspection procedures. Here is a case in point, that these two great states with tremendous vehicle registrations deem it necessary to take corrective measures to insure the safety of the motoring public.

An entire program by the National Wheel and Rim Association has been built around this seemingly simple part . . . the brake drum. Today, replacement sales represent a multi-million-dollar business at the retail level. All levels of the automotive industry are picking up the story and assisting in the campaign. Won't you help? Contact your National Wheel and Rim distributor or local brake drum jobber for more details and promotional material.

Compacts May Capture 26% of Car Rentals

A SURVEY of more than 120 owner-managers in the National Car Rental System, Inc., across the country has indicated that compacts will make up approximately 26% of the system's rental fleet total.

Executive Vice President Walter J. Phillips said, "This acceptance of compact cars by the highly critical car rental market substantiates what the auto manufacturers already know—that there is a significant demand for this type of car."

In cities of more than one million population, the survey showed that the system's fleets will be composed of more than 32% compacts in the coming year. Rental fleet purchases of as high as 50% compact cars were reported in a few cities. "Loaded" compacts with radio, heater, automatic transmission and whitewall tires are preferred by rental customers, according to the survey.

The Bucks

Are Waiting

and if you doubt it, turn to page 91 to learn how to reap \$7.

"A spark plug's missing? Call the police! I've been robbed!"



Mississippi Sets Up Test Requirements

BEFORE he can participate in Mississippi's safety inspection program scheduled to go into effect Jan. 1, a mechanic must have had a minimum of one year's practical experience as an automobile mechanic, according to R. L. Morgan, director of motor vehicle inspection for the state.

To inspect vehicles, that mechanic must be examined and certified by a member of the motor vehicle inspection service of the Department of Public Safety. He must then pass an examination as to his knowledge of the requirements of the law for various types of vehicles and must demonstrate his ability to operate efficiently and correctly the various testing devices required.

Requirements of an official inspection station include:

- 1.—Only bona fide repair shops and garages will be eligible to qualify as inspection stations.
- 2.—Persons who operate or are employed by the applicant must be of good reputation.
- 3.—The general character, attitude, knowledge and ability of each person to be associated with inspections will be considered.
- 4.—The appearance of the building, access thereto, its location, floor space, repair equipment and stock of replacement parts will be carefully checked.

Equipment must include tools and facilities for making tests, repairs and adjustments ordinarily encountered in making vehicle inspections, such as a lift jack, pedal blocks, brake and headlight testing devices, headlight aimer, etc. Photographs of facilities must accompany preliminary application forms.

A fee of \$1.25 will be charged for an inspection and issuance of a certificate of inspection or rejection.

Miami Dealers Adopt "Fair Play" Code

ACODE of ethics adopted by the 45-member Greater Miami (Fla.) Automobile Dealers Association demands that car advertising be accurate and truthful, insists that all cars for sale be in operating condition and dictates that the advertised price of a car be the complete price for delivery in the Miami area.

An association spokesman said the project reflects "common sense—based on the theory that it's good business to give the other fellow a fair shake." Other city dealer groups have adopted similar codes.

Castles of St. Louis Sees 51 Buick Years

DAVID E. Castles, Sr., president of Castles-Wilson Buick Co., St. Louis, Mo., has begun his 51st year of association with Buick.

Starting as a parts boy at the Dallas, Texas, branch of the old Buick Motor Co., Castles was with the company in Texas and Oklahoma until about 40 years ago when he joined Westside Buick, forerunner of his present organization, which was formed in 1947. Castles

is a past president of the Greater St. Louis Automotive Association and one of its organizers. He also helped organize his state dealers' association.

Blackhawk Advances Osburn

Dave H. Osburn has been advanced to eastern regional manager by Blackhawk Automotive Division for an area including Maryland, Delaware, Virginia, West Virginia, part of Kentucky and all the New England states.

it takes



**MORE
THAN
GOOD
PRODUCTS**

to make a line valuable to Service Shops.

At ARROW, we start with the finest products and then plan every feature of our merchandising program to make the ARROW line easy to buy, easy to sell, profitable to handle. Here are some of the ARROW extras:

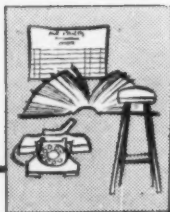
1. A complete line of generators, starters, starter drives, armatures and solenoids to fit almost every make and model on the road today, including foreign cars and 1960 models. And you can get them all at your ARROW jobber.
2. Specialized rebuilding of electrical units only, backed by ARROW's exclusive "102" test, protects the Service Shops' profits.
3. A complete catalog, easy to use because it contains complete application data. You can select the right unit quickly . . . save time, avoid errors.
4. Sound pricing to give both Service Shops and Jobbers a fair profit . . . but without "extra jobber discounts". Extra jobber discounts are rarely passed along to Service Shops . . . never offered with first quality products.
5. Merchandising aids to help you sell.
6. Experienced direct factory representatives are available, through your ARROW jobber, to help solve electrical service problems.
7. A reputation for fair business practices maintained for more than thirty years.

If this is the kind of company you would like to do business with, let us know . . . we will have the ARROW District Manager in your area give you complete details.



ARROW ARMATURES COMPANY

BOSTON 34, MASS., SPARTANBURG, S. C.



SOUTHERN JOBBERS and FACTORY MEN



Clapp Had to Set Up Small-Engine Plant

By WARNER OGDEN

THE small-engine business has grown to such an extent that R. T. Clapp Co., Knoxville, Tenn., started a separate division this year in a modern building leased just 100 feet west of the main store and with about 4,500 square feet of floor space.

A full-time educational director is employed to conduct classes for mechanics of dealers served.

"The small-engine business has more than doubled in the last three or four years," said A. D. Moody, president and general manager. "It became necessary to open a separate division for small engines and we were fortunate in being able to lease a building near the main store.

"The division is staffed with a manager, one full-time salesman for

small engines and parts exclusively, two counter men and two men in the service department.

"We opened the division in January 1960 and in the first season of operations we have had an increase of 30 to 40% in small-engine business. We anticipate a 50% increase in 1961 over 1960.

"We had a backlog of service work in the 1960 season, which gives some idea of the volume in the small-engine industry. We consider the new division another forward step in the expansion of the company.

"In our area, in addition to the larger number of power mowers, the power-operated garden equipment has grown tremendously. Also industrial equipment, and go-carts.

"Our educational director conducts classes for authorized service dealers of all the small engines we distribute. He also goes, with complete instruction materials, into the territory and conducts schools for our service distributor accounts and their service dealers."

"The company's trade area extends west of Knoxville to and including Chattanooga, Southwestern Virginia

Service in the small-engine division of R. T. Clapp Co. takes place in this shop. At the well-equipped workbenches are Joe Cook (left) and Arthur Paul.





President A. D. Moody (left) and D. W. Moody, sales manager at the nearby main store, look over a small-engine display at the front of the small-engine division building.



Howard Hammer (left), manager of the small-engine division of this Tennessee firm, and Guy Craig, sales representative, confer before Craig leaves to call on customers.

and Western North Carolina.

"Each year from 100 to 150 service mechanics attend our schools and there are not enough mechanics for the expanding market," said the Tennessean.

"Our classes for the small-engine service mechanics are in winter — early in the year. We have one-day sessions and in 1961 may have two full days, or a total of 16 hours.

"Our educational program was started about 12 years ago and has grown in demand to the point where we have a waiting list of mechanics to enter the various classes we teach.

"We feel it is very necessary to maintain our educational department and that it has contributed greatly to the success of our business.

"We train our personnel in the field to do the service jobs properly in support of the many manufacturers we represent.

"Each year, in winter months, we have a refresher course for small engines and on overhaul and tune-up procedures, and on new products, including the new models for that year, prior to the opening of the season."

The over-all business of the company has increased more than five times since Moody started with it in 1940 and he believes the educational service has helped much.

Howard Hammer is manager of the new small-engines division and Guy Craig is the sales representative.

"I am prejudiced toward the small-engine division," said Ham-

mer. "I have seen the small-engine business grow from three-bin merchandise to something large enough to fill a building.

"At one time the company was seriously considering, years ago, just forgetting about the franchise, due to the fact that there wasn't any movement on it. Today it seems as though everyone has some sort of fractional-horsepower engine. It is becoming a tremendous thing.

"It's definitely a specialty line. It takes personnel training in this, due to the many applications required to service the customers. It takes a man factory-trained and understanding it. Now it is one of the major lines—no longer a sideline with our company."

All dealers must, of course, be

B. H. Kimbrough checks the inventory control system, situated at the side of the counter in the special building for small-engine sales and service.



able to service what they sell. And R. T. Clapp Co. supplies parts and service information along the actual help in solving their service problems.

Persons who buy power mowers or anything else with small engines are encouraged by the company to go to the authorized dealer for service. In the new small-engine division, though, service is given on such items. The shop has workbenches with the latest equipment and next to it is a room where power mowers or other serviced items are kept, out of the way, until called for.

Behind the order counter at the front are long rows of orderly steel shelving with thousands of parts. The order man can take an order basket to a shelf and fill any order quickly.

A news bulletin is also sent to dealers, with information on new products and servicing.

A dealer is also chosen for a writeup, with pictures, as the "Garageman of the Month."

C. W. "Jack" Lewis Dies

C. W. "Jack" Lewis, field sales manager for several years for the Fulton Sylphon Division of Robertshaw-Fulton Controls Co., Knoxville, Tenn., died last month.

Meadows Moves in Orlando

The J. L. Meadows Co., manufacturers representative of Orlando, Fla., has moved to 5108 Mortier Ave., J. L. Meadows announced.



Leaders of SCAWA for the new year include (l. to r.): front row, J. B. Bagwell, Jr., of Charleston, retiring president; Guy M. Tarrant of Columbia, president; Ned E. Holland of Greenville, first vice president; Aubrey Hatfield of Sumter, second vice president; Oscar Newberry of Spartanburg, secretary; T. Halmon Coker of Columbia, renamed treasurer; Clarence Earley of Greer and J. Rogers, Jr., of Piedmont, directors; standing, Cecil

Morris of Greenville, president a year earlier; Traugott Kern of Columbia, manager; George A. Smith of Beaufort, James A. Brown of Greenville, Harold Lutz of Sumter, N. Frank Alford of Florence, W. Leon Rippey of Rock Hill, E. F. Workman of Greenwood and J. Walter Elliott of Charleston, directors. Directors absent were F. M. White of Dillon and H. W. Cook. The association was created two years ago with more than 40 members.

Palmetto Meeting Draws Attendance of 125

ATTEendance at the second annual convention of the South Carolina Automotive Wholesalers Association at Columbia Nov. 16-17 totaled 125—a new record. Jobbers and their personnel outnumbered factory men and representatives.

L. A. Thayer, president of Automotive Service Industry Association and vice president of Belden Mfg. Co., Chicago, told the convention:

"I do not believe in going to Washington every time we skin our knuckles. I think we are going socialistic fast enough."

He called for "more business in government and less government in business." However, he declared that if evidence could be produced of oil companies keeping a monopoly on TBA business at service stations to the extent of freezing out the market for automotive wholesalers, ASIA was standing ready to combat any such movement by proposing corrective legislation. Thayer said he understood that at a recent St. Louis convention the oil companies discussed "the menace" of jobbers to their TBA business.

The one-time salesman of Beard & Stone at Houston urged:

"Let's talk up our industry and its advantages," saying that "if you think this is a lousy industry, then it is a lousy business and your employees will reflect your attitude," as well as the public.

Other speakers included, besides the panel participants pictured below, Miss Gretchen Rider of Chicago, executive secretary of Automotive Booster Clubs International; Ed. L. Lee of New York, executive secretary of Automotive Affiliated Representatives, and the banquet

speaker, the Rev. Hubert A. "Baldy" White of Stockbridge, Ga.

Mrs. E. A. Jenkins, Sr., widow of the well-known Columbia jobber, was introduced as the first woman to drive an automobile in South Carolina—a Locomobile in 1902. Attending her first automotive convention last month, she confessed she obtained her first driver's license "a few years ago."

Booster Club B-33, Charlotte, sponsored the cocktail party and President Dick Rosier presented a gavel to James B. Bagwell, Jr., of Charleston, the retiring president.

A panel discussion on "Warehousing Versus Redistribution" featured (l. to r.): Thomas S. Perry and B. M. Smith of Atlanta, W. H. Rockafellow of Columbia, William C. "Bill" Herbert of Atlanta (moderator) and James C. Parker of Chattanooga. Bottom photo shows the audience which heard the two-hour discussion.





Heading up FAWA for the new year will be (l. to r.): seated, A. H. Hines of Hollywood, the retiring president; John Engels of Sarasota, president; Joe N. McLendon of Tallahassee, secretary-treasurer, and H. V. "Bo" Bodine of Orlando, executive secretary; standing, Warren A. Birt of Jacksonville, A. F. Powell of Fort Lauderdale, L. A. Null of Lake City and Harvey H. Miller of Orlando, directors. Absent were V. M. Dupy of Miami, vice president, and directors J. H. Stewart of St. Petersburg and A. J. Pockrus of Pensacola.

Automated Salesmanship Hit by Manufacturer

DESPITE these days of automation, "only 'humanity' gets ideas, gets results, gets satisfaction, gets rewarded."

That's what C. A. Benoit, Jr., president of Permatex Co., Inc., New York, told the sixth annual convention and trade conference of the Florida Automotive Wholesalers Association at Jacksonville Nov. 17-19 in an address calling for boosting "the ancient, honorable and indispensable art of salesmanship."

In a luncheon address the manufacturer declared:

"Sure, my company will take advantage of every benefit redistribution can offer. But, we take this as a sign to increase salesmanship, not to cut it down."

He asserted that alert warehouse distributors desire factory field assistance and maintained:

"Once manufacturers automate all the way—right out to the last relationship between jobber and dealer — personal enterprise is through. And the independent, creative, free-wheeling salesman no longer has an area in which to function. . . .

"I have no beef with redistribution. But I have a real beef with the creeping paralysis of salesmanship that is associated with redistribution. Too many of us take the easy way and allow ourselves to become automated.

"In essence I am promising you that this manufacturer, at least, will welcome all the benefits of redistribution—even in its most automated form—but I will never permit redistribution of the selling function in our business."

Benoit was introduced by Joe Del Greco of Cincinnati, one of his company's field managers and president of Automotive Booster Clubs Inter-

national, who spoke at first on the Booster movement.

Other speakers included L. A. Thayer, president of the Automotive Service Industry Association, who repeated largely from his talk the day before in South Carolina (see opposite page), and Ed. L. Lee of New York, executive secretary of Automotive Affiliated Representatives.

W. J. McClure, president of Truth, Inc., Greensboro, N. C., told of the widening use of lie detection in industry. His firm has been serving more than 200 accounts in the Carolinas alone, with growing interest as employers have become aware of the heavy drain of assets in the form of employees' taking home items from the shelves of their employers, he said. McClure cited figures on this annual loss of hundreds of millions of dollars.

Seminars on a variety of subjects were conducted one afternoon by Marvin Scarboro of Orlando, C. W. Arnold of Jacksonville, A. F. Powell of Fort Lauderdale, Marshal G. Luce of Miami and Joe N. McLendon of Tallahassee.

Approximately 120 manufacturers participated in the Saturday afternoon table conference.

Executive Secretary H. V. "Bo" Bodine reported that membership had climbed by 55 in the past year—rising from 110 to 165.

Mrs. Edgar H. Rogers, Jr., Jacksonville, wife of FAWA's second president, was crowned "Miss FAWA of 1961," succeeding the retiring queen, Mrs. Richard Shanahan, formerly of Tampa but now of Atlanta.

Marvin Scarboro of Orlando received the distinguished service award for setting up tabulations of machine shop prices.

Edmund Harding of Washington, N. C., was the banquet speaker.

Participants in a panel which tackled questions on a wide range of aftermarket problems included (l. to r.): John Engels, Sarasota jobber and FAWA's new president, who was formerly a factory vice president; Hal Miller, now residing at Sarasota but remaining as chairman of the board of Womwell Auto-

motive Parts Co., Lexington, Ky.; William C. "Bill" Herbert, SAJ's editor (moderator); Clyde Hawkins, president of Patten Sales at Jacksonville, and Edgar H. Rogers, Jr., a past president of FAWA who is now a warehouse distributor at Jacksonville. The convention attendance totaled 415.





These men will lead Automotive Booster Club B-6, Atlanta, during the new year. All are directors except where noted otherwise (l. to r.): Al Berger, executive secretary; Obie Powell, retiring president; Bill Osgood; Al Clayton; Phil Scales; C. R. McGruder, secretary; Grant Roy, president; George Gissing,

first vice president; Toby Voyles; John (Fred) Agel, second vice president; Charles Bridwell, treasurer, and "Chuck" Divers. Not shown is Warren Katz, a director. The annual Booster party, held Nov. 26, attracted 180 persons and included cocktails and a dance.

Seven Southerners Win Dow First Prizes

AMONG the first prize winners in The Dow Chemical Co.'s annual saran fibers incentive contest—designed to encourage the manufacture and sale of automotive seat covers woven from saran fibers—were these men residing in parts of the South:

Arthur Fulmer, Jr., of Arthur Fulmer Co., Memphis, Tenn.; Carl Hederstedt of Texoma Seat Cover Co., Gainesville, Texas; Thomas Cox of Thomas Cox Co., Charlotte, N. C.; Thomas Hartley, Jr., of National Coated Fabrics, Inc., Washington, D. C.; Harold Stein of Oklahoma Tire & Supply Co., Tulsa, Okla.; Bill Wehunt of Georgia Coated Fabrics Co., Atlanta, Ga., and Dew-

ey Farris of S. E. Hyman Co., Kansas City, Mo.

Airtex Celebrates 25-Year Service

AIRTEX Products, manufacturer of fuel pumps, water pumps, hydraulic brake parts, tie rod ends and front-end parts, recently marked 25 years of operation with an open house celebration at its Fairfield, Ill., plants.

Service pins awarded to 122 employees included ten 25-year awards, nine 20-year awards, seventy-nine 15-year awards, 19 ten-year awards and five five-year awards. About half of the company's employees have ten or more years of service, according to Art Conn, director of industrial relations.



William A. Shope, Jr. (right), is shown being congratulated by Bert Kaple upon being presented the Bert Kaple Award for "Mr. Booster of 1960" after being selected for outstanding service to B-6, Atlanta, by an undisclosed committee of judges. Kaple is a past international president of the Boosters.

"I guess he's afraid I'll learn how to fix the car by watching him."



Pittsburgh Plate Ups Douglas

Henry H. Douglas has been elevated to manager of the East Point (Atlanta), Ga., factory of Pittsburgh Plate Glass Co.'s Paint and Brush Division, succeeding William J. Timberman, Jr., who retired after 20 years' service. Douglas, who joined the organization through a company-sponsored fellowship at Mellon Institute in Pittsburgh in 1937, transferred to East Point in October as assistant manager from a similar position at the firm's Newark, N. J., plant.

West Virginia Store Moves

Huntington Auto Supply Co. of Huntington, W. Va., has moved to 618 7th Ave. The company maintains a complete machine shop as well as an inventory of truck and car parts.



This photograph of the board of governors was taken during the annual convention of the Automotive Warehouse Distributors Association at Kansas City, Mo. (l. to r.): seated, Harry D. Rothman, Seaport Automotive Warehouse, Oakland, Calif.; Sol. E. Fuchs, Fox Distributing Co., Chicago; A. P. Walter, A. P. Walter Co., Chicago; Bernard Bock, Bobro Products, New York, N.Y.; Thomas S. Perry, Thomas S. Perry Co., Atlanta, Ga.; Robert S. Weber, P. E. Weber, Inc., Milwaukee; Paul R. Livoni, Crum & Lynn, Inc., Los Angeles; Walter T. Devine, Lenk, Inc., Boston, and J. S. Connell, Tool & Parts Warehouse,

Inc., Dallas, Texas; standing, Roy Bunting, Motor City Automotive, Inc., Detroit; Martin Fromm, executive secretary; J. B. Bushyhead, Moog Industries, Inc., St. Louis, Mo.; Curtis McKay, Goldenberg & McKay, AWDA legal counsel; L. A. Cunningham, Western Warehouse Distributors, Ltd., Vancouver, B.C., Canada; W. E. Lahr, Jr., W. E. Lahr Co., Minneapolis; John J. Vida, Manley-Vida Distributing Co., Philadelphia; James R. McLean, Jr., Automotive Parts Warehouse, Inc., Norfolk, Va.; Jack F. Whitaker, Whitaker Cable Corp., Kansas City, Mo., and Don M. Hanson, E. Edelman & Co., Chicago.

AWDA Draws Record Attendance; Importance of Factory Men Cited

A NEW attendance record of nearly 600 delegates, alternates and guests attended the 13th annual convention of the Automotive Warehouse Distributors Association at Kansas City's Muehlebach Hotel last month.

Membership has been steadily climbing in recent years, now exceeding 200 and about evenly divided between affiliate manufacturers and warehouse distributors.

Thomas S. Perry of Atlanta, retiring after two years as president, asserted, "The development of warehouse distribution has been due to economic changes."

His successor is the former first vice president, 33-year-old Robert S. Weber of Milwaukee. Other officers include Bernard Bock of New York City, first vice president; Paul R. Livoni of Los Angeles, second vice president; Harry Rothman of Oakland, Calif., secretary, and A. P. Walter of Chicago, treasurer. Martin Fromm of Kansas City is the veteran executive secretary.

Board members besides the officers include Perry, Roy Bunting of Motor City Automotive, Inc., Detroit; J. B. Bushyhead of Moog Industries, Inc., St. Louis; L. A. Cunningham of North Burnaby, British Columbia; W. E. Lahr, Jr., of W. E. Lahr Co., Minneapolis; James R. McLean, Jr., of Automotive Parts Warehouse, Inc., Norfolk, Va.; John

J. Vida of Manley-Vida Distributing Co., Philadelphia, and Jack F. Whitaker of Whitaker Cable Corp., North Kansas City, Mo.

Walter Nash of Monroe Auto Equipment Co., Monroe, Mich., is chairman of the manufacturers' advisory council and John Bury of Purolator Products, Inc., Rahway, N.J., is co-chairman.

A resolution was adopted terming the manufacturer's agent and/or factory salesman "one of the keystones to the success of warehouse distribution" and asserting "the warehouse distributor needs and wants the manufacturers' agents or factory sales help to assist the warehouse distributor in promoting the sales of the product." It called for close cooperation by W.D.'s with agents and factory men.

Paul R. Livoni of Los Angeles, chairman of the research committee, reported that tabulations of replies from 58 W.D.'s to an AWDA

The North makes peace with the South! Robert S. "Bob" Weber (right) of Milwaukee, the new president of Automotive Warehouse Distributors Association, shakes hands with outgoing President Thomas S. Perry of Atlanta, declaring the dispute between the states is definitely settled. In the background is the handsome (just plain lovely to all Southerners) six-by-four Confederate flag presented by Weber as a gift to the obviously elated Georgian. Perry was the first recipient of the Ernest A. Tapp Memorial Award, created a year ago to go to some person who has performed unusual service to the association.

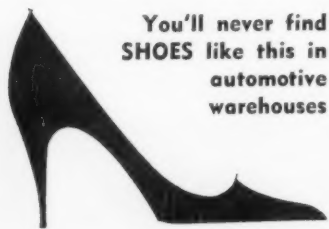


questionnaire revealed the average as having 18,000 square feet of floor space, with the largest having 56,000 and the smallest 3,200. They averaged 30 lines and 19 employees.

Over the past three years wholesalers' gross profit has been averaging 28%, while W.D.'s has been hanging around an average 20% gross profit.

These replies showed mufflers and tailpipes as the top line, with others in this order: shock absorbers, engine parts, tools, gaskets, oil filters, piston rings, ignition parts, spark

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Ira Saks (left) of Cleveland, Ohio, long prominent in the aftermarket, was recognized as the "Automotive Man of the Year" at the annual convention of Automotive Warehouse Distributors Association at Kansas City, Mo., last month. The selection was based on his battle to remove discriminatory excise taxes. Jack Lescoulle of NBC's "Today" show is shown presenting the award.

plugs, brake parts, rebuilt parts, rubber parts, chassis parts, chemicals and, in 15th place, universal joints.

Asked at a press conference about the resolution which was adopted, AWDA's new President Weber said his own company warehouses 13 lines, of which all but two are handled through representatives or factory men. He expressed the belief more redistributing wholesalers would become W.D.'s.

Convention speakers included T. S. Rose of Sealed Power Corp., Harry D. Rothman of Seaport Automotive Warehouse, Oakland, Calif.; J. B. Bushyhead of Moog Industries, Inc., St. Louis, Mo., retiring chairman of the manufacturers' advisory council, and Dr. Benjamin Werne, New York City labor and management specialist.

Don M. Hanson of E. Edelman & Co., Chicago, was presented the service award.

Seven distributors and 11 affiliate manufacturers were accepted for membership at the convention. The distributors include Alge Corp., Atlanta, Ga.; General Parts Warehouse, Inc., Sanford, N. C.; K-C Automotive Parts Warehouse, Inc., Danville, Ky., and Plains Parts Warehouse, Inc., Lubbock, Texas.

Purolator Promotes Nichols

Purolator Products, Inc., of Rahway, N. J., has promoted George N. Nichols of Memphis to district manager, covering Arkansas, Northwest Mississippi and Southwest Tennessee areas.



J. A. "Jack" Bryant (shown here), long-time Kentucky wholesaler, is in line for elevation from the first vice presidency to the presidency of Automotive Service Industry Association at the annual convention in Los Angeles Feb. 14-15, succeeding Les A. Thayer of Belden Mfg. Co., Chicago. Gene P. Roberts of Thermold Co. is currently second vice president and Jay T. Davis of The Motor Parts Co., Corpus Christi, Texas, is third vice president. Bryant is president of Motor & Electric Co., Bowling Green.

AC Appoints Three In Merchandising

New merchandising managers in the AC Spark Plug Division merchandising department are William R. Reynolds, oil filters; Edgar C. Setter, fuel pumps and related items, and R. D. "Don" McGovern, Guide lamps, pressure caps and hydraulic valve lifters.

Robert E. Sundwick, oil filter merchandising manager since March 1959, has been appointed to the field sales organization.

Reynolds joined AC in 1951 as a dealer merchandiser in Atlanta, Ga. He was promoted to territory manager in 1953 and became coordinator of specialized marketing in Flint, Mich., in March 1959. McGovern had been territory manager in Tampa, Fla., since March 1959. He joined the division at Atlanta in March 1956 as a dealer merchandiser.

Alabamians Pick Pensacola

The annual convention of the Automotive Wholesalers Association of Alabama will be held June 25-27 at the 400 Motel at Pensacola Beach, Fla., Executive Secretary John W. Rooney announced. Sam Meadows of Montgomery is president.

Wayne Fox is back as a salesman for J. C. Hamilton Co., Tulsa, Okla., after a year's absence, Sales Manager J. S. Chalmers announced.



Beard & Stone Electric Co. of Amarillo, Texas, has moved into this new \$150,000 warehouse and store which has almost doubled the floor space of its previous building, according to E. C. Beard, chairman of the board. The 23,290-square-foot structure was especially designed to meet the needs of a warehouse distributor and is more centrally situated than the former warehouse. More than two-thirds of the building is used for warehouse space with the remainder reserved for offices, a display room and lobby, training room, service department and a snack bar. It is air-conditioned with the exception of the warehouse area and service section.

Gulf & Western Aims Big

GULF & Western Industries is building a nationwide automotive parts distribution network which is expected to boost the Houston-based firm's sales above the \$100,000,000 mark in the "foreseeable future," John H. Duncan, president, said in a recent address to the New York Society of Security Analysts.

Behind the rapidly moving campaign of acquisitions in the automotive parts field, Duncan said, is the idea of applying "a super-market approach" to a \$2¼ billion business now being handled by more than 14,000 small and medium-sized jobbers.

"There is nothing extraordinary in the concept of the national distribution chain," Duncan said. "Such companies as A. & P. and Kroger have applied it with enormous success. It is our objective to apply that principle, with its advantages of large-scale economics, to the automotive parts field in this country."

Gulf & Western, already one of the biggest automotive parts distributors and the only one listed on a major stock exchange, acquired 25 additional wholesale outlets during the past fiscal year ended July 31, increasing the total for the company to 37.

Disclosing that negotiations are well advanced for other major acquisitions, Duncan said his company expects to "have 50 automotive outlets by Christmas."

Gulf & Western's program of acquisitions has already had an im-

portant effect on the firm's sales and earnings, Duncan told the analysts.

Adjusted sales for fiscal 1959 were \$21,861,000, compared with \$24,046,000 for fiscal 1960, an in-

crease of ten per cent. If sales of firms acquired in 1960 are eliminated from the 1959 figures, the sales increase amounted to nearly \$10,000,000. Earnings increased from 59 cents a share in 1959 to 63 cents in 1960.

For fiscal 1961, Duncan said, his company expects sales to increase by another \$15,000,000 to around \$40,000,000, and earnings "should rise to the range of \$1 to \$1.25 per share."

"I am confident we can maintain an average rate of increase in earnings of 25% per year in the next few years beyond the present fiscal period," Duncan explained. "These earnings will flow from the continuing expansion of sales of our company."

Duncan pointed out that Gulf & Western is a widely diversified company, although it is placing its chief emphasis on expansion of its automotive outlets because of the "great opportunities that exist in this area." The company has other subsidiaries engaged in wholesale distribution, manufacture of automobile bumpers and production of components used by researchers in the aircraft, space and missile industries.

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New president of the Automotive Wholesalers Association of Louisiana is H. L. Hutchison (third from left) of Dimmick Supply Co., Lake Charles, shown here with directors (l. to r.): L. Cancience of Houma Auto Parts, Houma; John M. Walton of John M. Walton, Inc., New Orleans, and Pete Mulhearn of Motor Supply Co., Monroe.

Over 200 Louisianans Meet in New Orleans

REGISTRATION at the seventh annual convention and trade conference of the Automotive Wholesalers' Association of Louisiana held recently at New Orleans exceeded 200, according to Executive Secretary Jules L. Lamothe.

Besides an address by Lt. Ramon E. BonEnfant of the Motor Vehicle Inspection Division on requirements of the state's inspection law to be enforced Jan. 1, the group heard H. C. "Skip" Stivers, director of replacement sales of The AP Parts Corp. Other speakers included Ed L. Lee, executive secretary of Automotive Affiliated Representatives; Leonard Connott of Piston Ring Service Co., New Orleans, and Gene Wall of Dimmick Supply Co., Lake Charles.

Banquet speaker was Charles E. Cullen of Charlotte, N. C., who appeared through courtesy of Automotive Service Industry Association.

H. L. Hutchison of Dimmick Supply Co. was elected president. Other

officers are Ed. Jennings of Rykoski's, New Orleans, vice president; R. H. Pope of Pope's Parts, Baton Rouge, treasurer, and Sid Farr of Farr Auto Supply, Alexandria, who is the secretary.

Besides the officers, directors include Stanley Massett of Universal Parts Co., John M. Walton of John M. Walton, Inc., Martin Charbonnet of Martin Charbonnet Auto Parts, all of New Orleans; L. Cancience of Houma Auto Parts, Houma; J. E. Magee of Morgan City Motor Supply, Morgan City; Fred Allums of Allums Battery and Service, Bossier City; Sam Grayson of Chain Battery and Automotive Supply, Shreveport; W. L. Hearn of Hearn Motor Parts, and Pete Mulhearn of Motor Supply Co., Inc., both of Monroe; W. P. Barnes of Barnes Motor Supply of Baton Rouge; M. J. LaBorde of LaBorde Auto Supply Co., Sulphur, and Dave Wilson of Standard Auto Parts and Machine Co., Alexandria.

Imperial power steering hose has been added by S. L. Miori Co., Wharton, Texas.



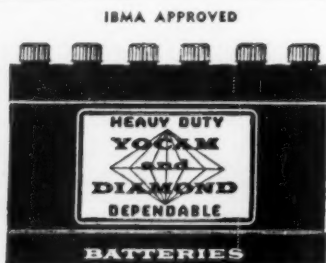
Les A. Thayer (shown here), president of the Automotive Service Industry Association, has been elected vice president in charge of sales of Belden Mfg. Co., Chicago. A veteran of 30 years with Belden, Thayer has been active in a number of trade associations in the industries served by his company, having been director of the Manufacturers Council and chairman of the sales development committee of the National Automotive Parts Association, among other offices.

NAAP Exhibit Names "Regional Directors"

"REGIONAL directors" appointed to act as representatives to provide full information to all buyers, manufacturers and manufacturers' representatives relative to the National Auto Accessory & Parts Exhibit, to be held in Las Vegas, Nev., July 31-Aug. 2, include:

Herb Calkins & Associates of Kansas City, Mo., Ken Hershey of Miami, Fla., Lawson & Abbott, Harold Schnair Sales Co. and Bradley Wayne & Associates, all of Dallas, Texas.

Appointment of Elliott LaMontagne (shown here) as manager of the aftermarket division of Cole-Hershe Co., Boston, Mass., has been announced by President Leo Mayer. LaMontagne has had many years of experience in the aftermarket and was a manufacturer for nine years.



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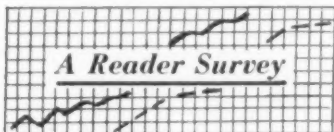
TAMPA - MIAMI - JACKSONVILLE
PENSACOLA - ORLANDO, FLA.
MOBILE, ALA. - COLUMBUS, GA.
COLUMBIA, S. C.

Sales Climb for 70%; Machine Shop Aids Volume; Anti-Freeze Blistered

MACHINE shops have been helping some jobbers over the South and Southwest maintain or increase their gross sales volume.

Replies to a questionnaire mailed to 350 last month revealed 70% of the respondents with higher sales the first ten months of this year over the same period of 1959, while 18% listed a downturn and 12% registered the same amount.

Nearly half of those with increases reported their rises at around ten



per cent, while the upturn for some was only slightly in excess of last year's performance.

A small-town Texan whose sales were up ten per cent commented: "We attribute some of this increase to our modern machine shop and our best effort to serve."

And a Missourian somewhat echoed this statement with his report that "machine shop service" and higher inventory accounted for his 11% jump in volume."

As has been true annually recently, anti-freeze distribution practices got a going-over, as:

From a small-town Texan — "I believe jobbers are going to have to give it up; too much price cutting." (His over-all sales were up ten per cent.)

From a small-town Kentuckian—"The only thing I can think of to solve the price cutting of anti-freeze is for all jobbers to stop handling the major brands." (His sales volume was also up "about ten per cent.")

An Alabamian who has long been prominent in his veteran state association and who headquarters in one of his state's smaller cities attacked "non-restricted distribution policies of most manufacturers. All levels of system need clarification." (His over-all sales were up approximately 15%.)

A small-town Virginian in the Shenandoah Valley reported:

"At the end of October we were practically even with the entire year of 1959 and have two of our best months ahead of us."

A well-known Tennessee wholesaler "saw red" in Atlanta last month when, while walking in the huge Lenox Square shopping area, he passed a "dime" store advertising "World's Lowest Price" on a well-known brand of anti-freeze. The price of \$1.83 was only a few pennies above his own actual cost.

Florida wholesalers have been reporting lower increases—or no increases to speak of—in recent months, in contrast to the skyrocketing figures which used to come out of the Sunshine State.

One West Coast Floridian whose sales were up four per cent assailed "warehouse distributors selling to fleets at jobber prices" which he

These men will lead Volunteer Automotive Booster Club B-44, Nashville, Tenn., this coming year: seated, Walker Cherry, secretary; standing (l. to r.), Robert T. Cherry, director; Milton Kaplan, treasurer; Troy Younger, director; William Kown, first vice president; Wendell Tipton, president, and Joe Stafford, second vice president.



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Quality Abrasives Since 1903

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termed a growing trend that was "beginning to hurt us." He declared, "We feel that they are entitled to wholesale quantity prices and no more."

A North Alabamian whose sales were about even with '59's reported, "Our profits will be lower due to many conditions over which we have no control."

Credits, he said, "are our biggest problem at this time. Accounts we have been selling for years and who have always paid promptly are lagging due to local conditions of too many people unemployed. We are certainly in a mild recession and adjustment period." (Steel and coal are factors in his section.)

Declines in sales generally were only a few percentage points at best.

Baird Dynamic Appoints Four for the South

FOUR Southern sales representatives appointed by Baird Dynamic Corp. for its line of flexible plastic paste are:

Carl E. Bennett and Allen Humphreys with Bennett-Humphreys Associates, P. O. Box 18634, Atlanta, Ga., who will cover Florida, Georgia, Mississippi, Alabama and Tennessee; Elro L. Crabtree of 3991 Rochelle Drive, Dallas 20, Texas, to cover Texas and Louisiana, and W. S. Watkins of Southern Sales Agency, 458-462 South Driver Ave., Durham, N. C., who will cover the Carolinas and Virginia.

McEwen Cherry Co. Moves In Nashville, Tenn.

THE McEwen Cherry Co., Inc., of Nashville, Tenn., will move around Dec. 15 to a new building constructed by the company at 25 White Bridge Road.

Expansion in business necessitated the move, President J. McEwen Cherry said. The organization has been in operation for the past 35 years.

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Wendell I. "Tip" Tipton (top) and William A. Hart (bottom) have formed Tipton-Hart & Co. of Roanoke, Va., specializing in rebuilt automotive parts and covering the Virginias, Kentucky and Tennessee. Tipton, who lives in Donelson, Tenn., has been active in the automotive aftermarket for ten years, working for Fram Corp. and Arrow Armatures Co. He is the new president of Automotive Booster Club B-44 of Nashville. Hart for the past nine years has been employed by Minnesota Mining & Mfg. Co. and Arrow Armatures. From his home in Roanoke he will travel Virginia and West Virginia. Tipton will cover Tennessee and Kentucky.

Ronald F. Dusenbery has been appointed assistant sales manager of the replacement division of Muskegon Piston Ring Co. He will direct the field sales personnel and be responsible for the execution of sales programs. He will headquarter at Muskegon.



Mississippi Wholesalers Organize State Group

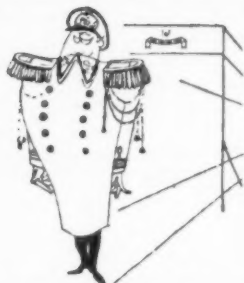
AN ORGANIZATIONAL meeting of automotive wholesalers in Mississippi was scheduled for Dec. 6, at the Hotel Heidelberg in Jackson.

To be coupled with the association's formation was a proposed plan for Automotive Service Industry Association and the new state body to meet with the director of motor vehicle safety to discuss operation of the vehicle inspection law to become effective Jan. 1.

Speakers were to include an executive secretary of an active wholesalers association and Richard A. Melvin, executive assistant of ASIA.

Tennesseans Select Memphis

The annual convention of the Automotive Wholesalers Association of Tennessee will be held April 30-May 2 at the Hotel Claridge in Memphis, Executive Secretary Keith Broyles announced. The association, presently headed by P. R. "Mike" Cochran of Camden, has increased its membership nearly 40% in the last year, including 15 members since the June convention.



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Missouri Jobbers Meet To Form Association

MISSOURI wholesalers were set to meet Dec. 4 at the Hotel Governor in Jefferson City for the purpose of organizing a state association.

Speakers scheduled included Tom Payne, executive secretary of the Automotive Wholesalers of Oklahoma, Richard A. Melvin, executive assistant of Automotive Service Industry Association, and a practicing automotive wholesaler.

All wholesalers in the state were invited to attend the "Dutch treat" luncheon and meeting without obligation.

Zac-Lac of Atlanta Ups Beverley and Ziegler

ELECTIONS of R. E. Beverley, Jr., and W. L. Ziegler as first vice-president and second vice president, respectively, have been announced by Zac-Lac Paint & Lacquer Corp. of Atlanta, Ga.

Beverley, who joined the organization in 1946, has been general sales manager since 1955. Ziegler has been associated with the company since



Appointment of Donald Burnett (shown here) as division manager for the Memphis territory (Arkansas and parts of Mississippi, Oklahoma, Tennessee, Missouri and Texas) for Van Norman Machine Co., a division of Van Norman Industries, Inc., has been announced by Philip D. Moulton, vice president in charge of automotive equipment sales. A native of Little Rock, Ark., Burnett graduated from Arkansas Polytechnic in 1948. Prior to joining Van Norman, he was district manager in Miami, Fla., for Alemite Co. of Jacksonville and district manager in Little Rock for Alemite of Memphis.

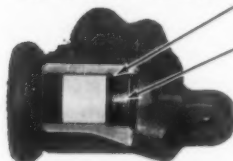
1957 when he became technical director and manager of plant operations.



George Southerland, Jr. (left), of Concord, N.C., accepts air line tickets to a free vacation in Hawaii for himself and his wife, Laura, from Philip D. Moulton, vice-president in charge of automotive equipment sales for Van Norman Machine Co. Southerland earned the free trip by selling the highest percentage over his assigned quota during the company's recent sales contest. His territory includes Virginia, North and South Carolina and Eastern Tennessee.

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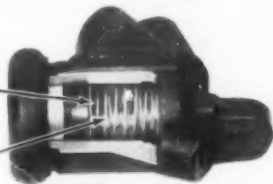
Tight expanders prevent cups from returning to normal position. Results—Dragging brakes, burned erratic lining, slow pedal return.

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Watch How You Pay Christmas Bonuses

You can foul up yourself if you don't watch how you pay Christmas bonuses.

A bulletin issued by Executive Vice President Ed Hayward to the Greater St. Louis Automotive Association pointed out:

"Arbitrator Donald A. Crawford decides that because the company paid a Christmas bonus for a continuous period of 19 years this practice is part of the wage pattern and a failure to pay the bonus last year violated the contract. The company insisted that the contract was silent on this point. But the arbitrator insisted that this bonus was never referred to as a gift and had been mentioned in the negotiations as a benefit which the union could consider as a concession gained under the new contract.

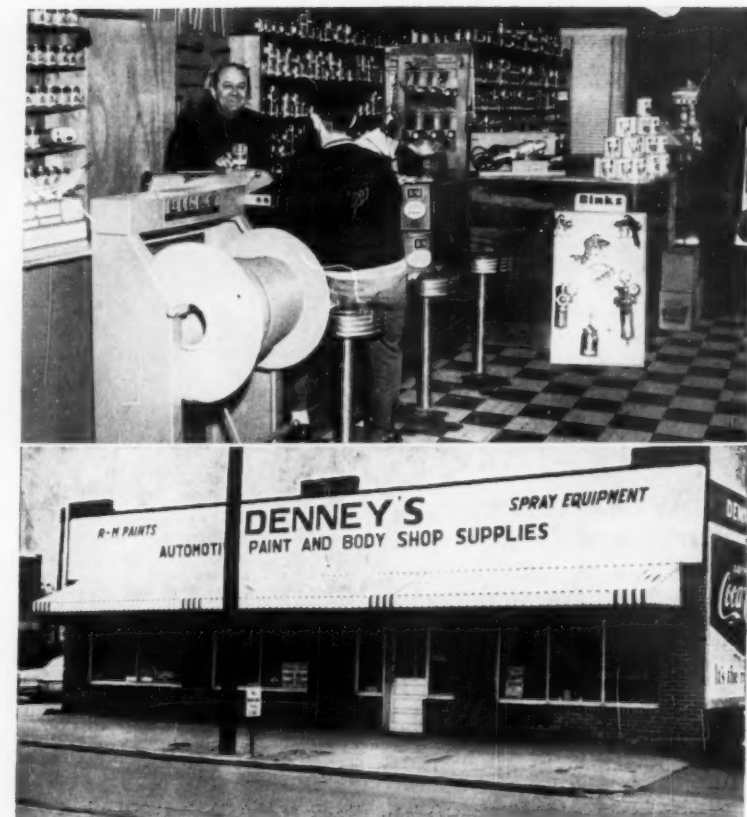
"The lesson to be learned from this case is to be certain that a bonus should be labeled as a definite gift and all mention of it avoided when negotiations are carried on."

Alexandria, Va., Store Opens

R. W. Electric and Equipment Co. has opened at 1936 Richmond Highway in Alexandria, Va.

Complete Spicer and other joint and driveshaft line and service have been added by The Flowers Co., Hickory, N.C., President H. L. "Les" Flowers announced.

"ATP" automatic transmission parts have been added to the lines of Ryan Supply Co., Hattiesburg,



This modern and streamlined home was occupied earlier this year by Denney's Automotive Paints & Supplies at Gadsden, Ala. Jim Denney (shown back of the counter) was a manufacturers' representative until 1955 when he and one employee opened for business in a store 50' by 18'. The firm moved in 1958 into a larger building and has now grown into this new building 50' by 125'. Denney today has five employees, other than himself and Mrs. Denney, serving paint and body shop accounts for a radius of 500 miles around Gadsden.

Miss., according to Manager Oscar A. Grady, Jr.

Frontier Mfg. of Dallas To Hold Celebration

COMPLETION of its new manufacturing facilities at 111200 Harry Hines Blvd. in Dallas, Texas, will be celebrated at an open house Dec. 15 by The Frontier Mfg. Co., manufacturers of steel shelving.

The company, established in 1947 at 10600 Harry Hines Blvd., reportedly pioneered the use of color in the shelving industry. In 1955 the organization purchased a tract of over 13 acres at its present site.

Quaker State Names Floridian

Quaker State Oil Refining Corp. of Oil City, Pa., has appointed Hal Davis, owner of Davis Oil Products, with main warehouse in Tampa, as exclusive distributor for Central and Southwest Florida. Davis' sales associates include Jack Cameron in the Sarasota area, Rod Lesseig in the Lakeland area, Ray Hogg in Pinellas and Bob Gerlach, Tampa.

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Robert W. Stuft (shown here) has been appointed replacement sales manager of World Bestos Corp. of New Castle, Ind., a division of The Firestone Tire & Rubber Co., succeeding J. W. Greenen, recently promoted to general manager. Former western division sales manager, Stuft will be responsible for replacement sales in this country and Canada.



J. McEwen Cherry, who founded The McEwen Cherry Co., manufacturers' representatives, at Nashville, Tenn., nearly 35 years ago, has announced his candidacy for the secretaryship of Automotive Booster Clubs International. He was president last year of Automotive Affiliated Representatives and is a past president of the Memphis and Nashville Booster clubs. He was charter member of Booster Club B-6, Atlanta.



Ray E. Barnes (shown here) has been appointed territory sales manager for the Columbus Parts Corp. of Toledo, O., in Virginia and North Carolina, Sales Manager James Balough announced. A native of Norfolk and Kempville, Va., Barnes was formerly a field sales manager for R. M. Hollingshead Corp. and Simonix Wax Co. His latest position was with the U.S. Rubber Co.

Mrs. Al Jones Dies in Tampa

Mrs. Al Jones, Sr., partner in Al Jones & Co., Tampa, Fla., died last month after almost a year's illness. Her husband is senior partner in the firm. She often attended meetings of the Florida Automotive Wholesalers Association.

Kentuckian Names Tull

Ralph W. Tull has been appointed by J. Paul Saunders Co. of Bowling Green, Ky., as territory representative in Kentucky, Tennessee, Mississippi, Alabama and Northwest Florida. J. Paul Saunders announced.

Prest-O-Lite Picks Alabamian

Parts and Equipment Co., Anniston, Ala., has been appointed warehouse wholesale distributor of Prest-O-Lite batteries, according to Jeff Shea, sales manager for Prest-O-Lite Division, The Electric Auto-lite Co., Toledo, O.



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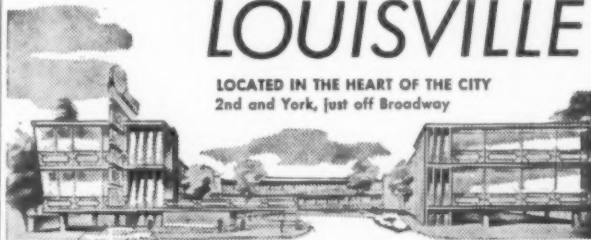
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"TWO-STAGE SEATING ACTION"

1

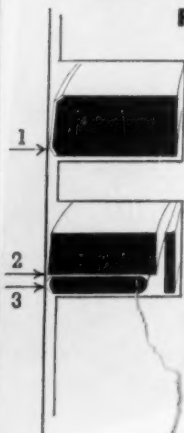
Tapered face design seats "Power Point" instantly, stops smoking immediately. Phosphate coated cast iron mates with wall on the first few piston strokes.

2

Chrome rail is an extra ring—another barrier against blow-by, with a design that eliminates the "pocket" for oil pressure build up.

2

"OUR CUSTOMERS BUY RESULTS"



3 rings in 2 grooves give quickest seating possible. Chrome on top ring makes it shockproof, wear resistant, yet it seats the same day. Second groove features instant seating of phosphate coated cast-iron, chrome rail for oil and blow-by control.

3

"HAVEN'T HAD A SMOKER YET"



Same day seating actions of rings above—plus C-9 oil ring's side-of-groove sealing make Ramco stop pumping, smoking the day the rings are installed. Oil can't work behind C-9 to burn in chamber. Rails feature pre-seated chrome.

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A subsidiary of Thompson Ramo Wooldridge Inc.

